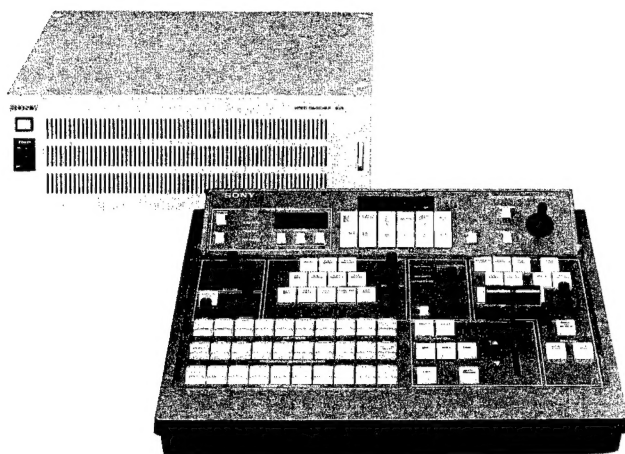


**SONY**

VIDEO SWITCHER

**BVS-3100P**



MAINTENANCE MANUAL  
Volume 1 1st Edition (Revised 3)  
Serial No.10001 and Higher

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(This Section will be Available at a Later Date.)

## Volume 2

### 5. BLOCK DIAGRAMS

### 6. SEMICONDUCTOR ELECTRODES

### 7. SCHEMATIC DIAGRAMS

### 8. PRINTED CIRCUIT BOARDS

### 9. SPARE PARTS AND FIXTURE



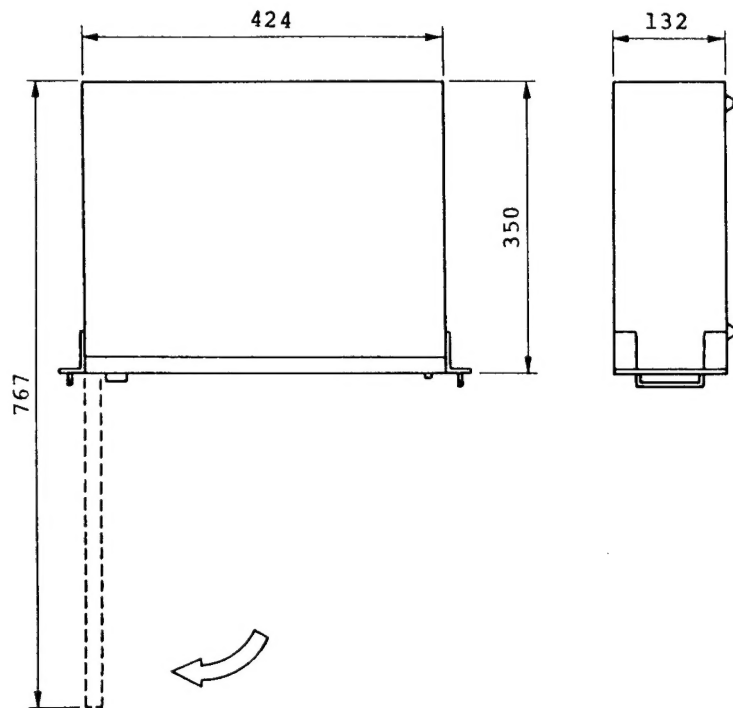
## SECTION 1 INSTALLATION

### 1-1. ENVIRONMENTAL REQUIREMENTS

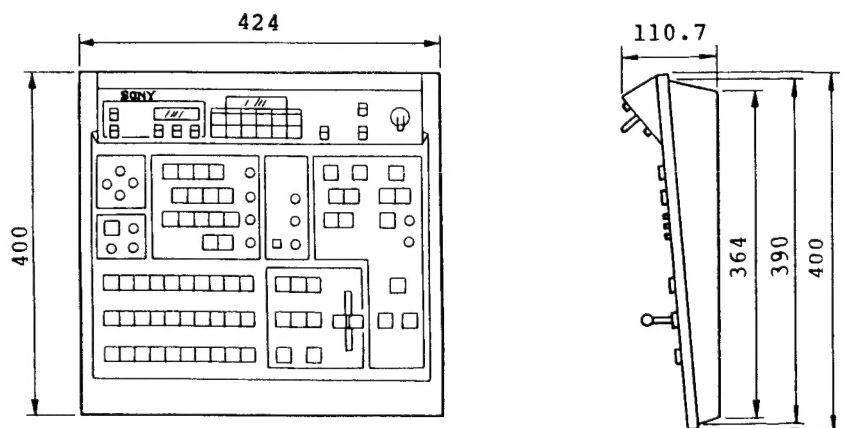
- . Carefully consider the air circulation of the place in which the unit will be placed to protect against temperature rises within the unit.
- . Since the ambient temperature range for the set during operations is 0°C to 40°C, never place the unit near a heat source.

### 1-2. EXTERNAL DIMENSIONS

#### . Process unit

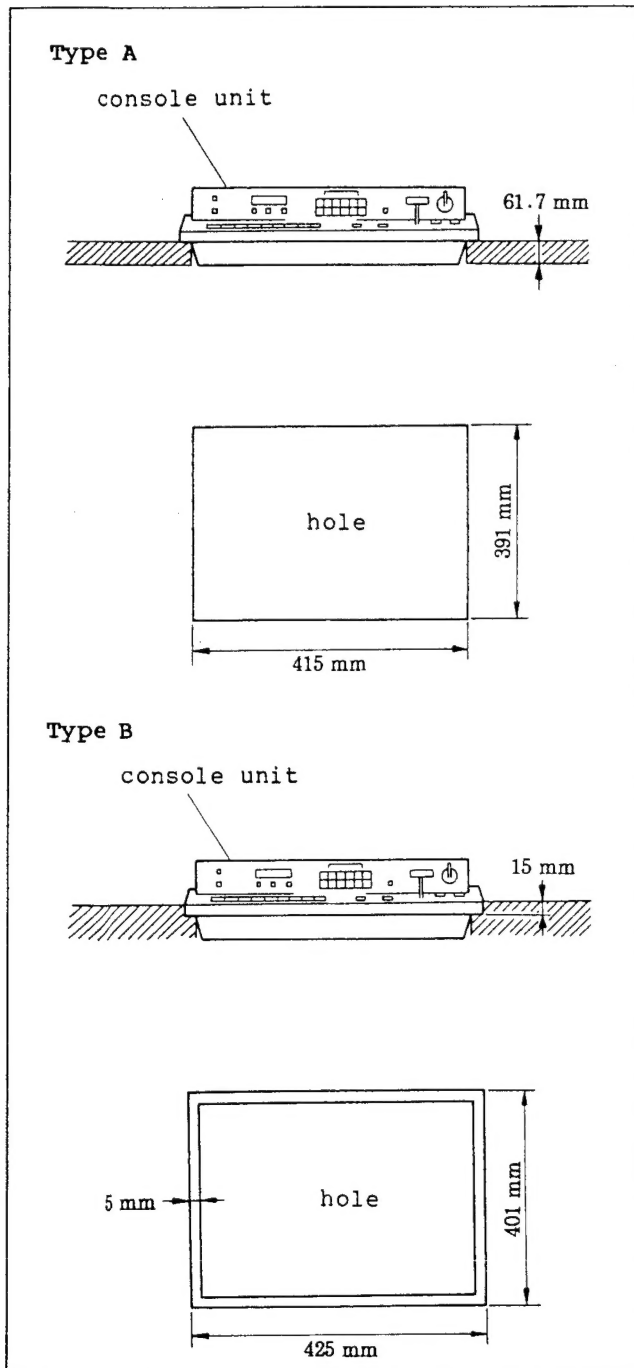


#### . Console unit



### 1-3. SPACE REQUIREMENTS FOR INSTALLATION

- . If the unit is to be installed in a console, be sure to cut a hole in the console of the dimensions given in one of the diagrams below.



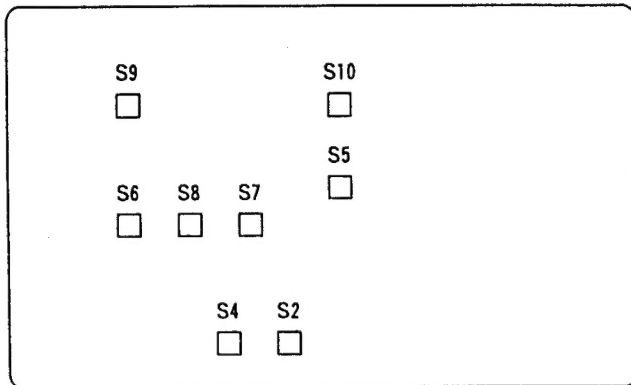
### 1-4. POWER SUPPLY

- . Since the power supply for the BVS-3100 utilizes a switching regulator (+5V, +9.5V, +15V, and  $\pm 9V$ ), the unit can be operated without modification on any power supply in the 220V  $\pm 10\%$  range.

### 1-5. SETTING THE SYSTEM SELECT SWITCHES

- . The select switches on all PC boards are described in the pages that follow. Since the select switches should be set according to operational requirements and the type of system desired, be sure to set them accordingly.

### 1-5-1. SD-19A Board



SD-19A board

- . S2: BLACK BURST INT/EXT switch  
EXT/INT is selected for the black burst signal and fade to black color black.  
INT: The signal generated by the black burst generator within the unit is output.  
EXT: Black burst signal received at GEN LOCK IN (on the connector panel) is output.
- . S4: SYNC REPLACEMENT ON/OFF switch  
This is the switch used to replace the SYNC burst which is used to internally generate the blanking interval of the video signal which is output from PGM OUT (on the connector panel).  
ON: Replace  
OFF: Not replace

Switches S2 and S4 all bear relationships with each other. The way in which they function is shown in the chart below.

		SYNC REPLACEMENT ON/OFF Switch							
		ON				OFF			
		B. B Switch				B. B Switch			
		EXT		INT		EXT		INT	
		SET UP Switch		SET UP Switch		SET UP Switch		SET UP Switch	
		ON	OFF	ON	OFF	ON	OFF	ON	OFF
SET UP (IRE)	COLOR BLACK for PRIMARY BUSES	7.5	0	7.5	0	7.5	0	7.5	0
	COLOR BLACK for FADE TO BLACK	The same as GEN LOCK IN				The same as GEN LOCK IN			
	BLACK BURST OUT 1/2/3/4								
SYNC/ BURST	PGM OUT	The same as GEN LOCK IN		The inner SYNC GEN		The same as PRIMARY VIDEO			
	PVW OUT	The same as PRIMARY VIDEO							

. S5: KEY PROCESSOR ADJ A/B switch

This switch is used when making adjustments to the key processor section.

A: during normal operations.

B: during adjustment.

. S6: BKGD COLOR ADJ ON/OFF switch

This switch is used when adjusting the chroma for the background color.

ON: during adjustment.

OFF: during normal operations.

. S7: EFFECT MATTE COLOR (OVER) ADJ ON/OFF switch

This switch is used when adjusting the chroma for the matte color (over).

ON: during adjustment.

OFF: during normal operations.

. S8: EFFECT MATTE COLOR (UNDER) ADJ ON/OFF switch

This switch is used when adjusting the chroma for the matte color (under).

ON: during adjustment.

OFF: during normal operations.

. S9: FTB ADJ/CONT switch

This switch is used when making adjustments to the fade to black section.

ADJ: during adjustment.

CONT: during normal operations.

. S10: FTB Y/(R/B) switch

This switch is used to select the conditions for replacing the blanking interval for the color difference signals.

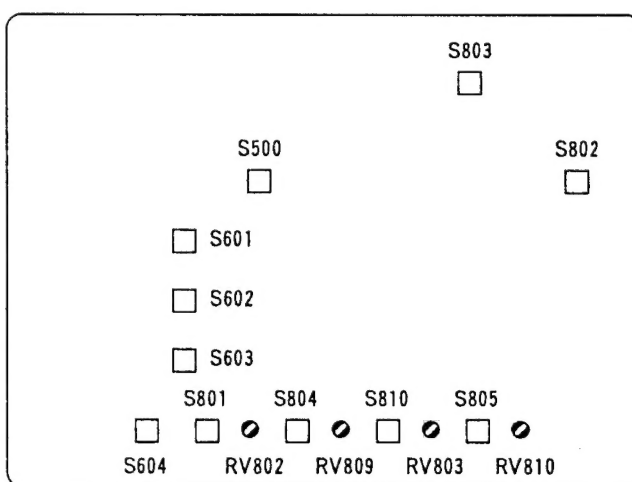
Y: Replacement on/off is selected using S4 in the same manner as with the Y signal.

R-B: The blanking interval for the color difference signals is replaced regardless of the setting of S4.

Factory settings

SW NO.	Setting
S2	INT
S4	ON
S5	A
S6	OFF
S7	OFF
S8	OFF
S9	CONT
S10	R/B

1-5-2. SD-20 Board



SD-20 board

. S500: DSK MATTE COLOR ADJ ON/OFF switch

This switch is used to adjust the DSK color chroma.

ON: during adjustment.

OFF: during normal operations.

. S601: CHROMA KEY DELAY select switch

This switch is used to adjust the delay for the chroma key signal.

. S602: CHROMA KEY DELAY select switch

This switch is used to adjust the delay for the chroma key signal.

. S603: CHROMA KEY DELAY select switch

This switch is used to adjust the delay for the chroma key signal. The relationship between the switches and the delay for the chroma key signal.

The relationship between the switches and the delay  
for the chroma key signal

○: ON

Delay nsec	S601								S602								S603					
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6
0																					○	○
30									○	○										○		
60									○		○									○		
90									○			○								○		
120									○				○							○		
150									○					○						○		
180									○						○					○		
210									○							○				○		
240									○								○			○		
270									○									○		○		
300									○										○	○		
330	○	○					○			○										○		
360	○	○					○				○									○		
390	○	○					○					○								○		
420	○	○					○						○							○		
450	○	○					○							○						○		
480	○	○					○								○					○		
510	○	○					○									○				○		
530	○	○	○	○				○		○										○		
540	○	○					○										○			○		
560	○	○	○	○				○			○									○		
570	○	○					○											○		○		
590	○	○	○	○				○				○								○		
600	○	○					○												○	○		
620	○	○	○	○				○					○							○		
650	○	○	○	○				○						○						○		
680	○	○	○	○				○							○					○		
710	○	○	○	○			○									○				○		
740	○	○	○	○			○										○			○		
770	○	○	○	○				○										○		○		
800	○	○	○	○				○											○	○		
830	○	○	○	○	○	○				○										○		
860	○	○	○	○	○	○					○									○		
890	○	○	○	○	○	○						○								○		
920	○	○	○	○	○	○							○							○		
950	○	○	○	○	○	○								○						○		
980	○	○	○	○	○	○									○					○		
1010	○	○	○	○	○	○										○				○		
1040	○	○	○	○	○	○											○			○		
1070	○	○	○	○	○	○												○		○		
1100	○	○	○	○	○	○													○	○		

. S604: CRK, Y-R, and B/RGB select switch  
This is the switch used to select the chroma key input.

. S801: SYNC GEN LOCK SC PHASE 0°/180° switch

RV802: SYNC GEN LOCK SC PHASE FINE volume control

These are the switch and the volume control for aligning the SC phi phase of the SYNC GEN LOCK signal of the main unit with the standard signal received from GEN LOCK IN.

Make rough adjustments (0° to 180°) using S801, and make fine adjustments using S802.

. S802: CABLE COMP ON/OFF switch

This is the switch used when compensating for the length of the cable being used. The gain for the input signal (the GEN LOCK signal) rises by about 6dB when this switch is set to on.

. S803: V BLANKING WIDTH select switch

The V blanking width can be set to 19H, 20H, or 21H depending on the position this switch is set to.

. S804: SYNC GEN LOCK H PHASE COARSE switch

RV809: SYNC GEN LOCK H PHASE FINE volume control

These are the switch and the volume control for aligning the horizontal SYNC phase of the SYNC GEN LOCK signal of the main unit with the standard signal received from GEN LOCK IN.

Make rough adjustments using S804, and make fine adjustments using S809. Since S804 is a 16 step rotary switch, the phase can be adjusted by approximately 220nsec per step.

. S805: AUX. BLACK BURST H PHASE COARSE switch

RV810: AUX. BLACK BURST H PHASE FINE volume control

These are the switch and the volume control for aligning the horizontal SYNC phase of the standard signal sent to the SONY Digital Multi Effector DME-450.

Make rough adjustments using S805, and make fine adjustments using S810.

Since S805 is a 16 step rotary switch, the phase can be adjusted by approximately 70nsec per step.

. S810: AUX. BLACK BURST SC PHASE 0°/180° switch

RV803: AUX. BLACK BURST SC PHASE FINE volume control

These are the switch and the volume control for aligning the SC phi phase of the standard signal sent to the SONY Digital Multi Effector DME-450.

Make rough adjustments (0° to 180°) using S810, and make fine adjustments using RV803.

#### Factory Settings

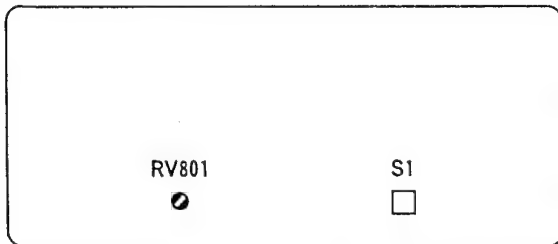
SW NO.	Setting
S500	OFF
S601	1 OFF
	2 OFF
	3 OFF
	4 OFF
	5 OFF
	6 OFF
	7 OFF
	8 OFF
S602	1 OFF
	2 OFF
	3 OFF
	4 OFF
	5 OFF
	6 OFF
	7 OFF
	8 OFF

SW NO.	Setting
S603	1 OFF
	2 OFF
	3 OFF
	4 OFF
	5 ON
	6 ON
S604	RGB
S801	0
S802	OFF
S803	20
S804	0
S805	0
S810	0



### 1-5-3. DUS-312 Board

#### DUS-312 board



. S1: Input V(B)S/V(B) switch

This is the switch used to select the primary input video signal.

V(B)S: selects the video signal with SYNC.

V(B): selects the video signal without SYNC.

RV801: Blanking level volume control

The blanking interval for the video signal output from PGM OUT (on the connector panel) is replaced when S4 on the SD-19A board is set to on.

#### Factory setting

SW NO.	Setting
S1	V(B)S

### 1-6. CONNECTOR INPUT/OUTPUT

#### 1-6-1. Processor

- . VIDEO IN 1 to 8 connectors  
BNC connector; bridge-through output terminals.
- . EXT VIDEO IN 1 connector  
BNC connector; bridge-through output terminal.
- . EXT VIDEO IN 2 connector  
BNC connector; bridge-through output terminal.
- . DSK EXT VIDEO IN connector  
BNC connector; terminated in 75 Ohms.
- . CHROMA KEY IN connector  
BNC connector; terminated in 75 Ohms.
- . EXT KEY 1 IN and EXT KEY 2 IN connectors  
BNC connector; bridge-through output terminal.
- . EXT KEY MASK IN connector  
BNC connector; terminated in 75 Ohms.
- . DSK EXT KEY IN connector  
BNC connector; terminated in 75 Ohms.
- . BLACK BURST OUT 1, 2, 3, and 4 connectors  
BNC connector.
- . GEN LOCK IN connector  
BNC connector; bridge-through output terminal.
- . PVW OUT connector  
BNC connector.
- . PGM OUT 1 and 2 connectors  
BNC connector.
- . AUX BB OUT connector  
BNC connector.
- . KEY 1 BUS OUT connector  
BNC connector.

AMERICAN

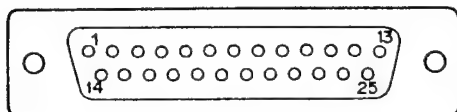
PIN NO.	Pin Name	Description
1	GND	Ground
2	RX-A	Data received by BVS-3100/3100P from DME-450/450P (−)
3	TX-B	Data transmitted to DME-450/450P from BVS-3100/3100P (+)
4	GND	Ground
5	—	—
6	GND	Ground
7	RX-B	Data received by BVS-3100/3100P from DME-450/450P (+)
8	TX-A	Data transmitted to DME-450/450P from BVS-3100/3100P (−)
9	GND	Ground

A diagram of a 10-pin D-sub connector. The pins are arranged in two rows of five. The top row is numbered 1, 2, 3, 4, 5 from left to right. The bottom row is numbered 6, 7, 8, 9, 10 from left to right. The connector has a D-shaped shield on the left and a circular ground pin on the right.

PIN NO.	Pin Name
1	GND
2	TX - A
3	RX - B
4	GND
5	
6	GND
7	TX - B
8	RX - A
9	GND

PIN NO.	Pin Name	Description
1	GND	Ground
2	TX-A	Data transmitted to Editor from BVS-3100/3100P (−)
3	RX-B	Data received by BVS-3100/3100P from Editor (+)
4	GND	Ground
5	—	—
6	GND	Ground
7	TX-B	Data transmitted to Editor from BVS-3100/3100P (+)
8	RX-A	Data received by BVS-3100/3100P from Editor (−)
9	GND	Ground

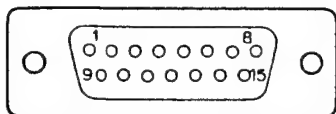
. CONTROL PANEL (D-SUB 25 pins)



- EXT VIEW -

PIN NO.	Pin Name	Description
1	GND	Ground
2	POWER (+9.5 V)	Power supply (+9.5 V)
3	TX-A	Data transmitted to the console from the processor (-)
4	GND	Ground
5	RX-A	Data received by the processor from the console (-)
6	—	—
7	—	—
8	—	—
9	FIELD PLS-A	Field Pulse (-)
10	GND	Ground
11	SHORT SENSE	Short Sense
12	POWER (GND)	Earth ground
13	POWER (GND)	Earth ground
14	POWER (+9.5 V)	Power supply (+9.5 V)
15	POWER (+9.5 V)	Power supply (+9.5 V)
16	TX-B	Data transmitted to the console from the processor (+)
17	GND	Ground
18	RX-B	Data received by the processor from the console (+)
19	—	—
20	—	—
21	—	—
22	FIELD PLS-B	Field Pulse (+)
23	—	—
24	DTR	Console connection check
25	POWER (GND)	Earth ground

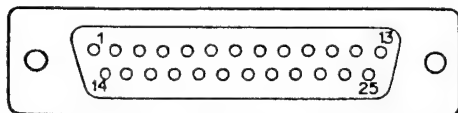
. GPI (D-SUB 15P)



- EXT VIEW -

PIN NO.	Pin Name	Description
1	GPI-FADER	AUTO FADER data
2	GPI (GND)	Ground
3	GPI-DSK	DOWN STREAM KEYER MIX data
4	GPI (GND)	Ground
5	GPI-FTB	FADE TO BLACK data
6	GPI (GND)	Ground
7	GPI-SEL	Irrigger fader selected at the console
8	_____	_____
9	_____	_____
10	_____	_____
11	_____	_____
12	_____	_____
13	_____	_____
14	_____	_____
15	GPI (GND)	Ground

. TALLY (D-SUB 25P)

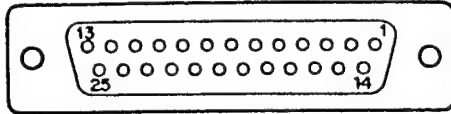


- EXT VIEW -

PIN NO.	Pin Name
1	TALLY-1
2	GND
3	TALLY-2
4	GND
5	TALLY-3
6	GND
7	TALLY-4
8	GND
9	TALLY-5
10	GND
11	TALLY-6
12	GND
13	_____
14	_____
15	TALLY-7
16	GND
17	TALLY-8
18	GND
19	_____
20	_____
21	_____
22	_____
23	_____
24	_____
25	_____

## 1-6-2. Console Unit

CN1 (D-SUB 25 pins)



- EXT VIEW -

PIN NO.	Pin Name	Description
1	F.G.	Frame ground
2	POWER (+)	Power supply (+)
3	CONS RX-A	Data received by the console from the processor (-)
4	CONS TX-COM	Common ground for transmissions between the console and the processor
5	CONS TX-A	Data transmitted to the processor from the console (-)
6	_____	_____
7	_____	_____
8	_____	_____
9	FIELD PLS-A	Field pulse (-)
10	FIELD PLS-COM	Field pulse common ground
11	SHORT SENSE	Short sense
12	POWER (GND)	Earth ground
13	POWER (GND)	Earth ground
14	POWER (+)	Power supply (+)
15	POWER (+)	Power supply (+)
16	CONS RX-B	Data received by the console from the processor (+)
17	CONS RX-COM	Common ground for transmissions between the processor and the console
18	CONS TX-B	Data transmitted from the console to the processor (+)
19	_____	_____
20	_____	_____
21	_____	_____
22	FRAME PLS-B	Field pulse (+)
23	_____	_____
24	DTR	Console connection check
25	POWER (GND)	Earth ground

## 1-7. CONNECTIONS TO THE CONNECTORS

Whenever connecting cables to the connectors on the rear panel during installation or servicing, be sure to use the following connectors or their equivalent.

### 1-7-1. Process Unit

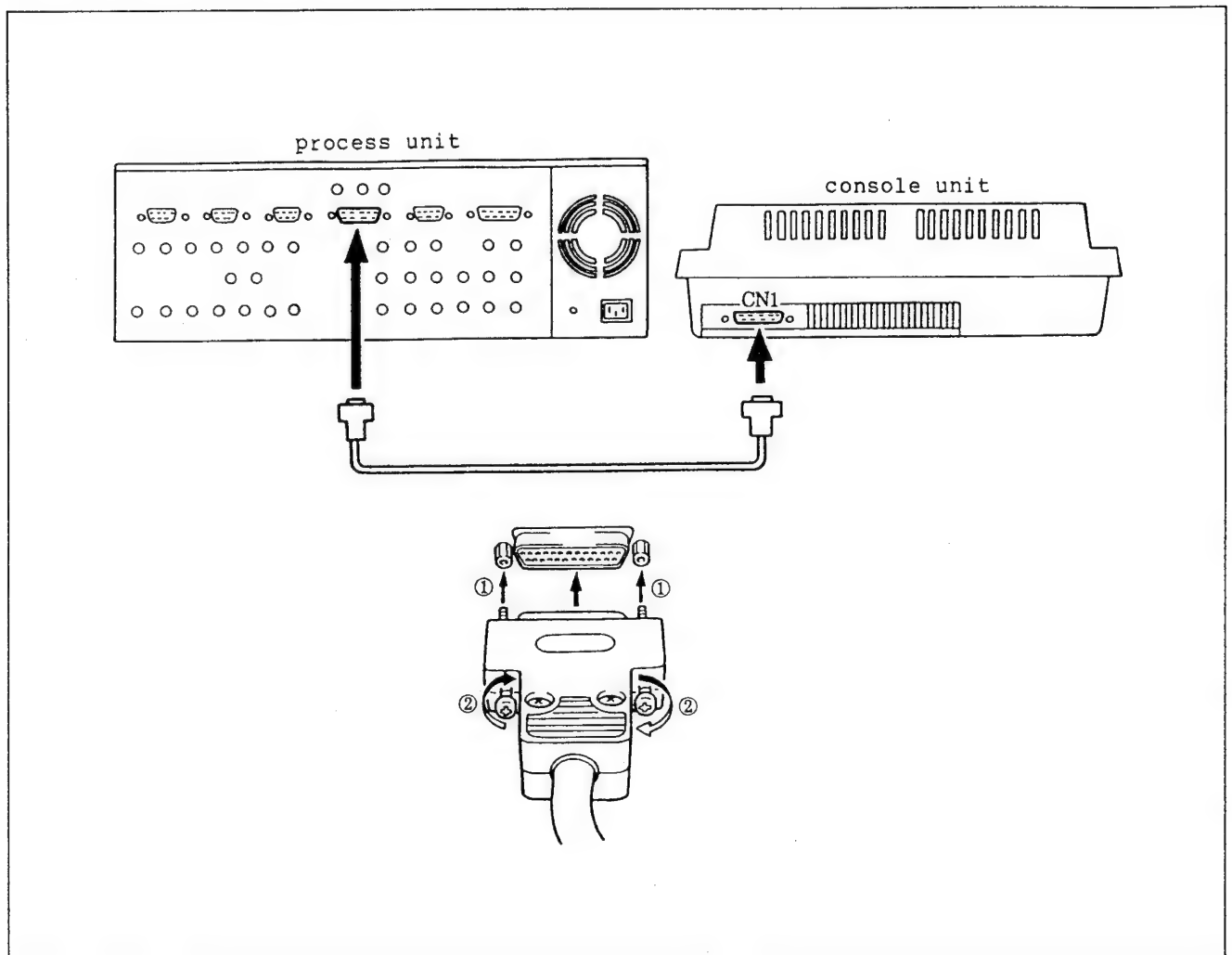
Pannel Display	Connector/Parts No.
VIDEO IN 1 to 8	Plug, BNC 1-560-069-11
EXT VIDEO IN 1	
EXT VIDEO IN 2	
DSK EXT VIDEO IN	
CHROMA KEY IN	
EXT KEY 1,2 IN	
EXT KEY MASK IN	
DSK EXT KEY IN	
BLACK BURST OUT 1,2,3,4	
GEN LOCK IN	
PVW OUT	
PVW OUT 1,2	
AUX B.B OUT	
KEY 1 BUS OUT	
EVE	Connector 9P (M) 1-560-651-00 JUNCTION SHELL 9P 1-561-749-00
AUX	
EDITOR	
GPI	1-564-592-11 (Accessory)
CONTROL PANEL	SWC-2505D (Accessory)
TALLY	1-564-592-11 (Accessory)

### 1-7-2. Console Unit

Panel Display	Connector/Parts No.
CN1	SWC-2505D (Accessory)

**1-8. CONNECTIONS BETWEEN THE PROCESSOR AND  
THE CONSOLE**

- (1) Plug in the connector.
- (2) Tighten the screws and affix.



## 1-9. RACK MOUNTING

### <Recommended parts>

Slide rails: 2 Accuride Rack Mount Slides, Model C-213-22L or C-203-22; slide length 26 inches.

Brackets: 4 Tokyo Metal Brackets, #816.

### <Necessary equipment>

6 inner member installation screws (+B4x5)  
8 plate nuts (3 holes each) (SONY part No. 3-651-812-01)

8 bracket installation screws (1) (+B4x8)

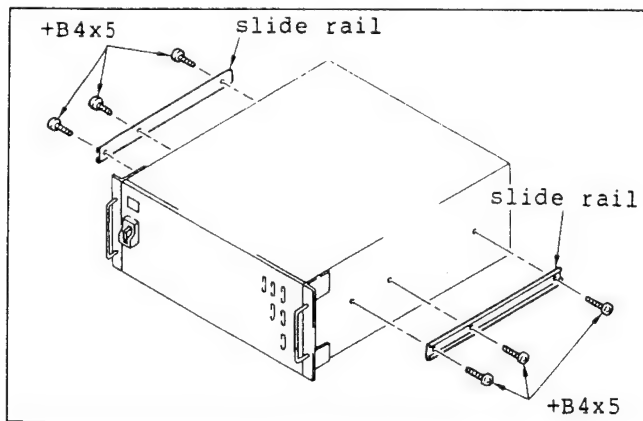
8 bracket installation screws (2) (+B4x12)

4 rack mount screws (+RK5x16)

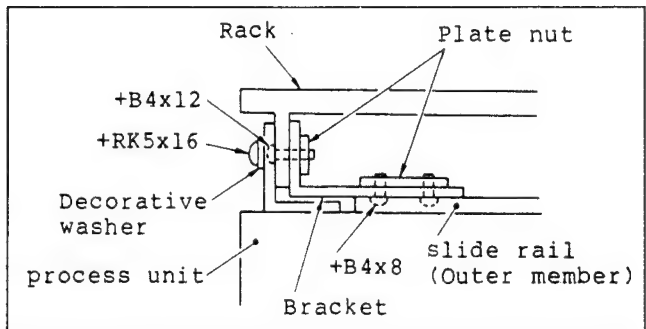
4 rack mount dress washers (SONY part No. 2-297-913-01)

### <Rack mount procedure>

1. Remove the two screws from the left and right panels, and attach the slide rails with the 6 screws (+B4x5).



2. Attach the outer member of each slide rail loosely to the four bracket plate nuts (3 holes each) using the 8 screws (+B4x8).
3. Fasten the brackets of the outer member of each slide rail to the rack using the plate nuts and adjust so that total length of the slide rail from the front end to the outside is aligned with the inner members on the unit side.



## 1-10. ACCESSORIES SUPPLIED

- . EX-201 extension board (1)
- . 15 pin connector (1)
- . 25 pin connector (1)
- . 25 pin to 25 pin connector cord (1)
- . Power supply cord (1)
- . Plug holder (1)
- . TIP Switch (3)
- . Operation Guide Book (3)
- . Operation Manual (3)
- . Maintenance Manual Vol. 1 (1)
- . Maintenance Manual Vol. 2 (1)

## 1-11. OTHER ACCESSORIES (SOLD SEPARATELY)

.SWC-2530D

This is the cable used to connect the processor to the console.

.RMM-3000

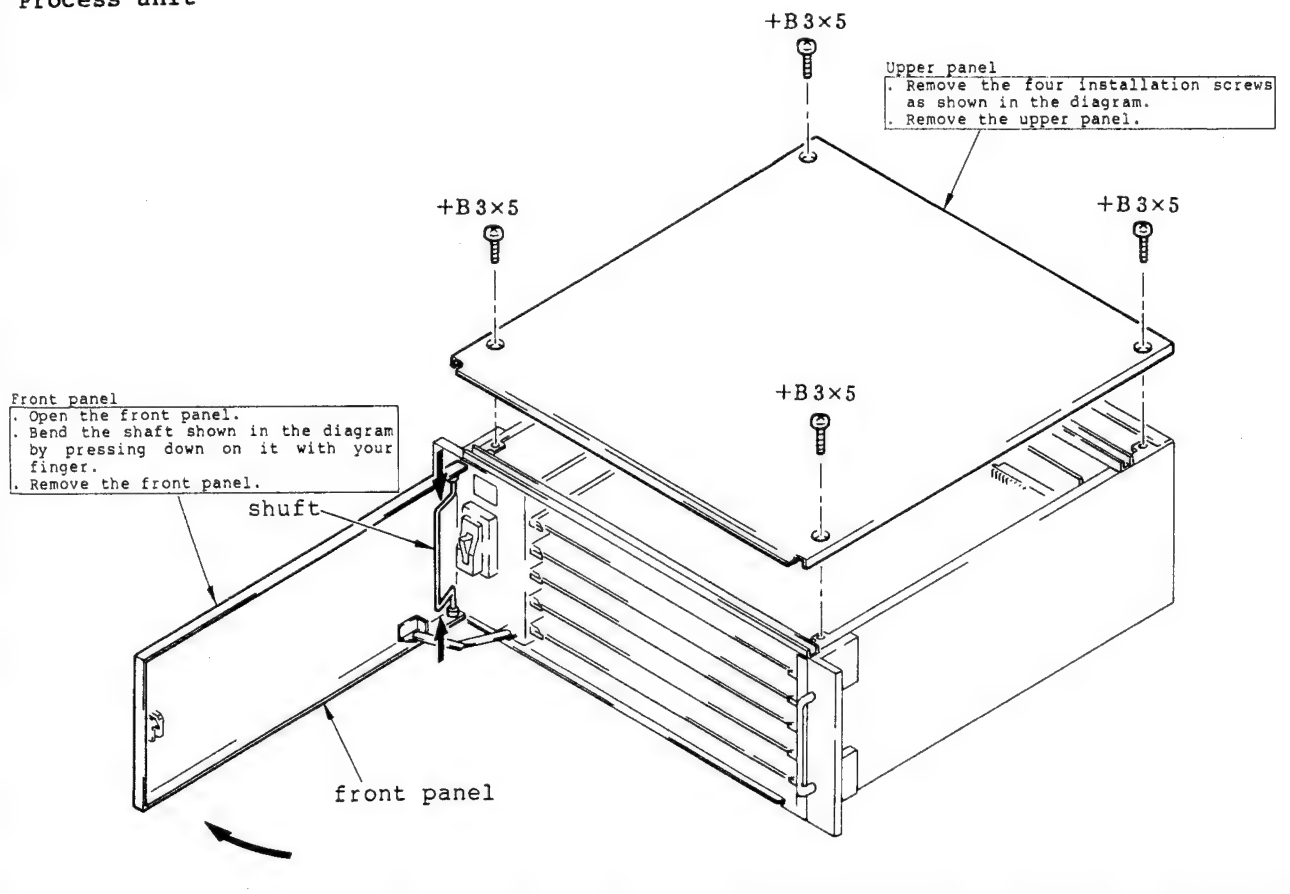
This is the rack mount metal to fix editing console for the console unit.



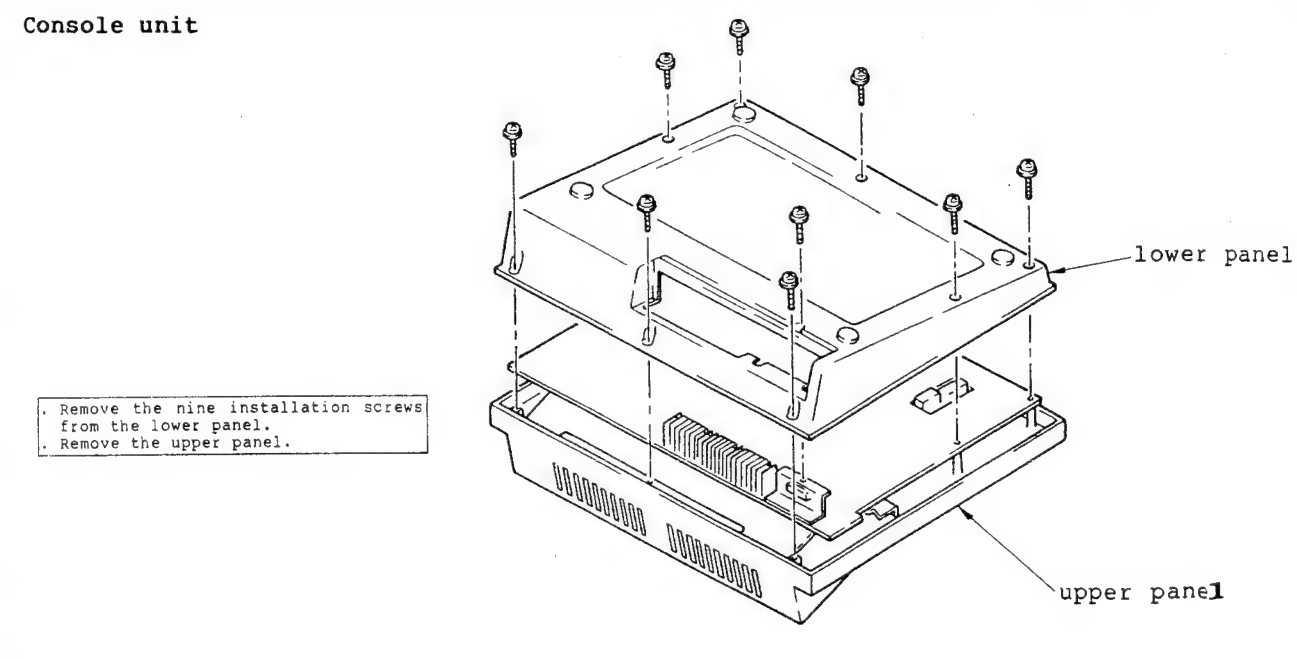
## SECTION 2 SERVICE INFORMATION

### 2-1. REMOVING THE OUTER CABINET

#### Process unit



#### Console unit



**2-2. BOARD LOCATION DIAGRAM****2-2-1. Process Unit**

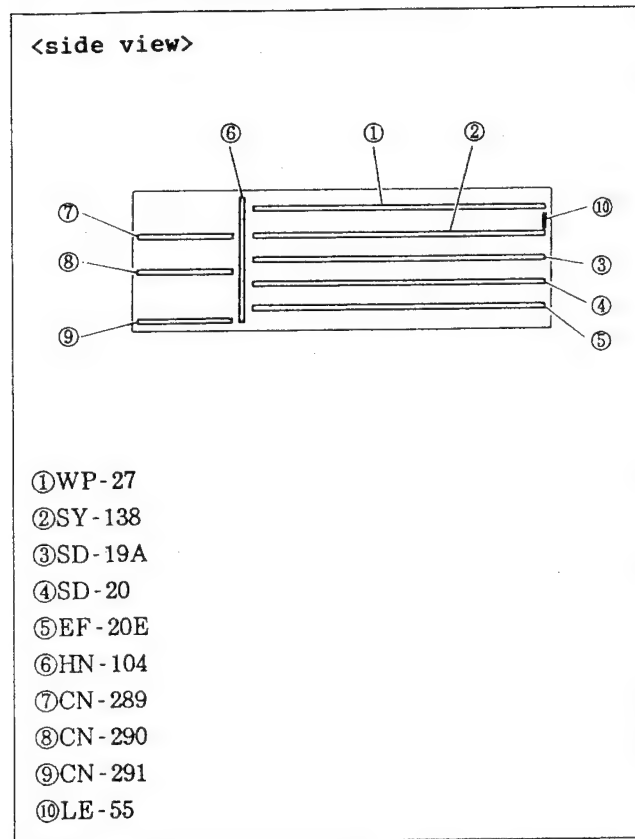
Board NO.	Description
CN-289	CONNECTOR
CN-290	CONNECTOR
CN-291	CONNECTOR
EF-20E	Y (COMPOSITE) SIGNAL PROCESSOR
EX-201	EXTENSION
HN-104	MOTHER
LE-55	LED
SD-19A	SIGNAL GENERATOR FOR SIGNAL PROCESS
SD-20	SYNC GENERATOR, CHROMA KEY, DOWN STREAM KEY SIGNAL GENERATOR
SY-138	SYSTEM CONTROL
WP-27	WIPE SIGNAL GENERATOR

**2-2-2. Console Unit**

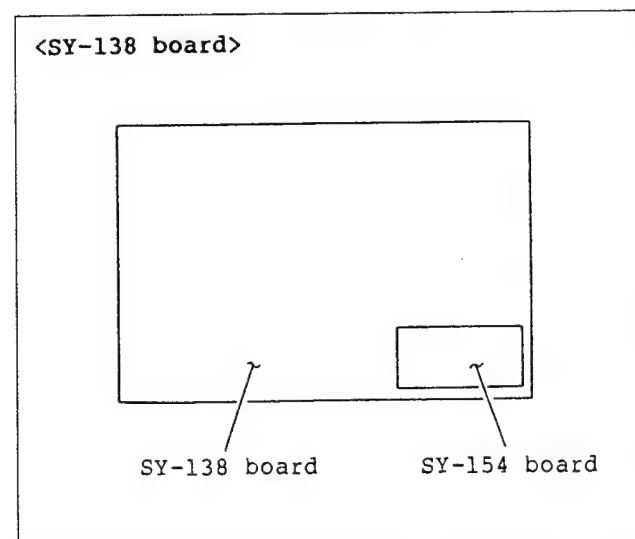
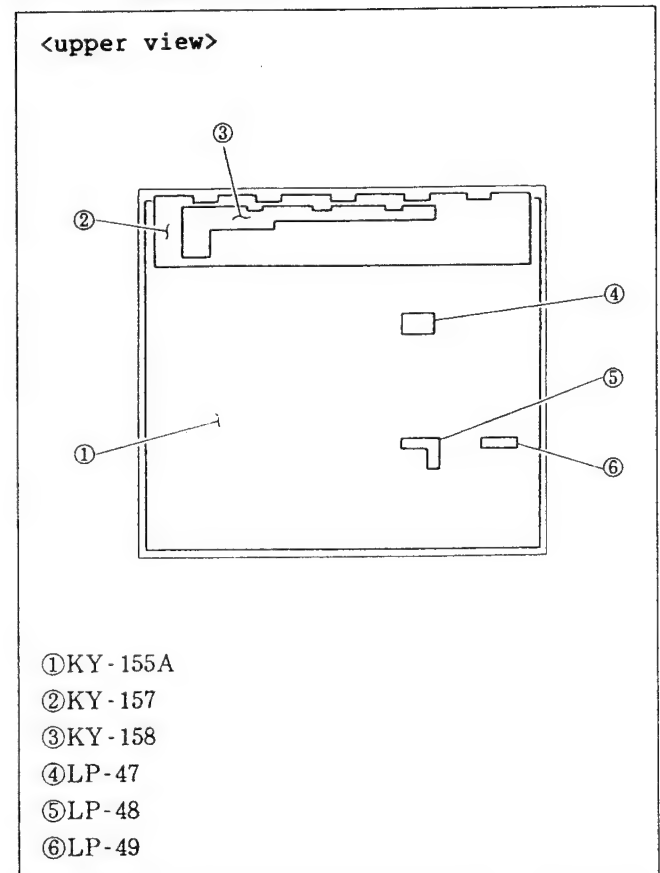
Board NO.	Description
KY-155A	SWITCH BOARD
KY-157	SUB SWITCH BOARD
KY-158	SUB SWITCH BOARD
LP-47	LED BOARD
LP-48	LED BOARD
LP-49	LED BOARD

## 2-3. CIRCUIT CONFIGURATION

### 2-3-1. Process Unit



### 2-3-2. Console Unit

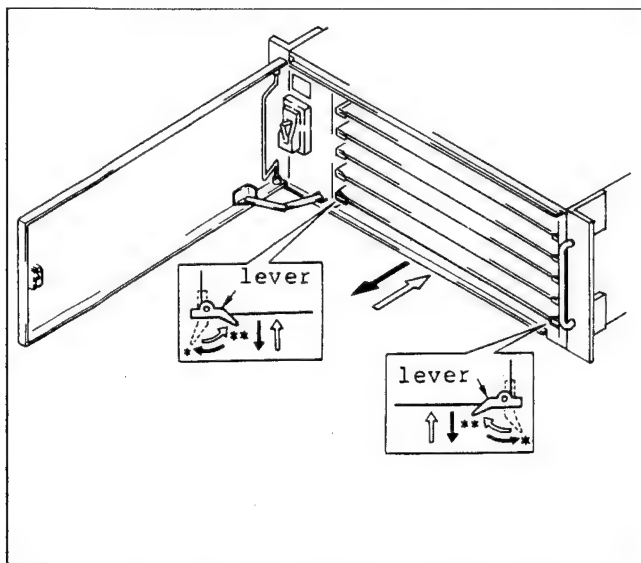


## 2-4. REMOVING THE BOARDS

### 2-4-1. Process Unit

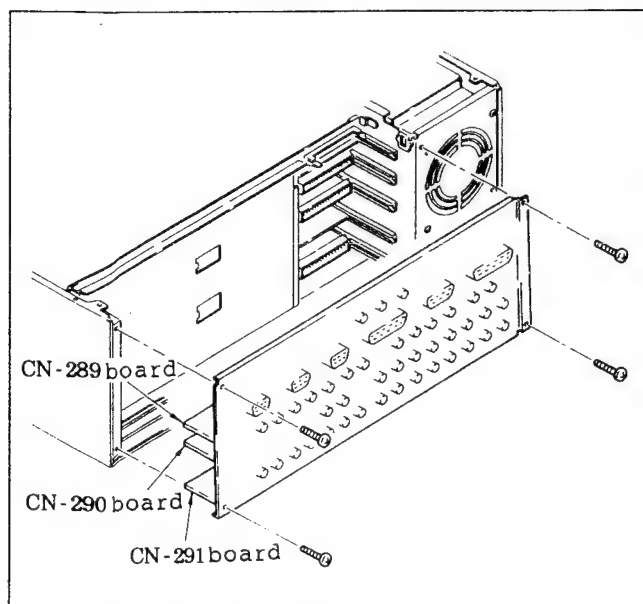
#### (1) Removing/Installing the Boards (Cards)

- The boards can be removed by pushing the board levers in the direction of the \* arrow and pulling the door toward yourself.
- Insert the boards parallel to the board lever guides and the board guides. The boards can be installed by closing the board levers in the direction of the \*\* arrow while inserting the boards into the holes in the left and right of the unit.



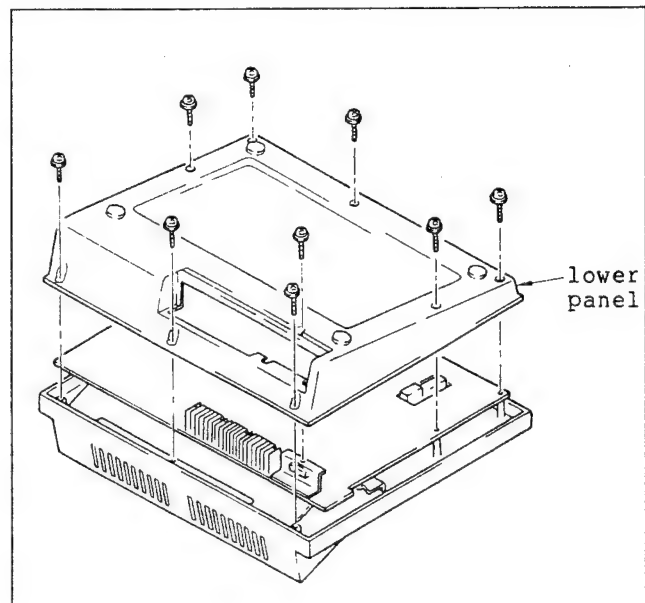
#### (2) Removing CN-289, CN-290 and CN-291 Board.

Remove the screws that have been attached and pull them out towards yourself.

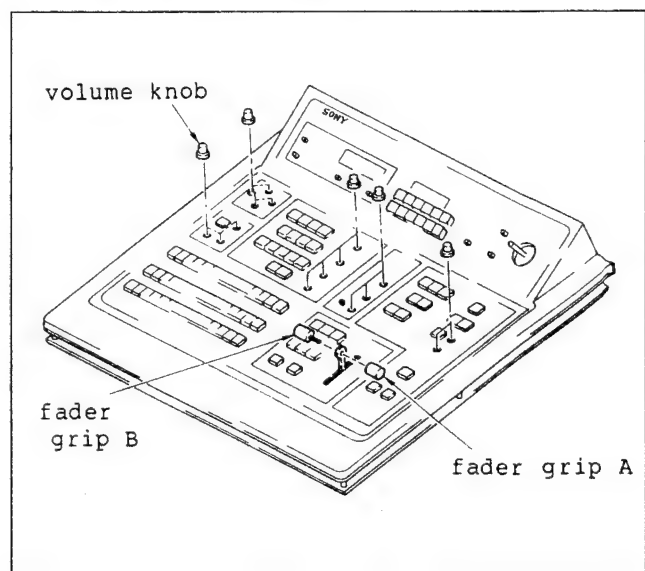


### 2-4-2. Console unit

#### (1) Remove the lower panel.

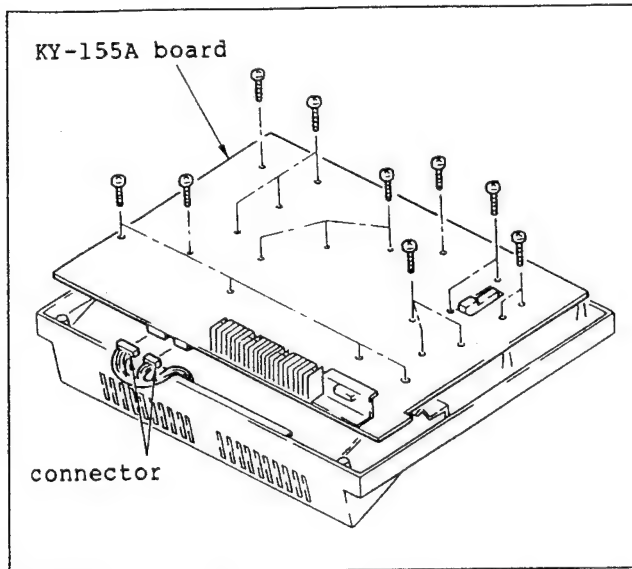


#### (2) Remove the Fader grip A and B, and sixteen volume knobs.



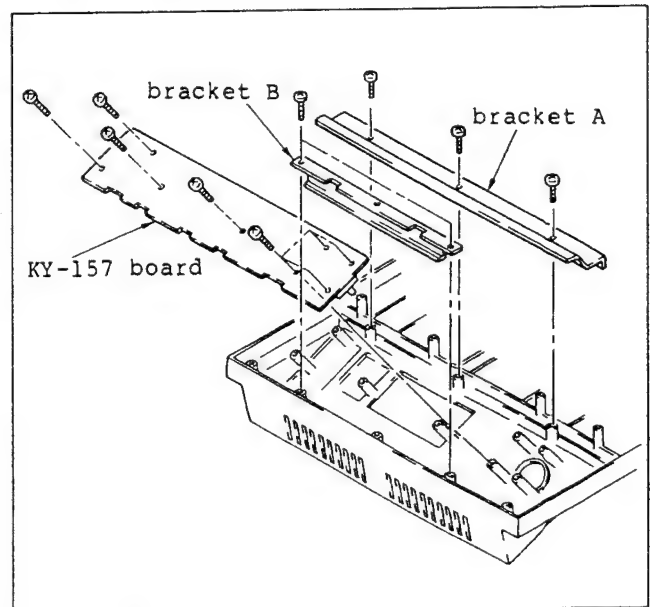
(3) Removing KY-155A Board

Remove the two connectors and the screws that have been attached.  
Remove the KY-155A board.



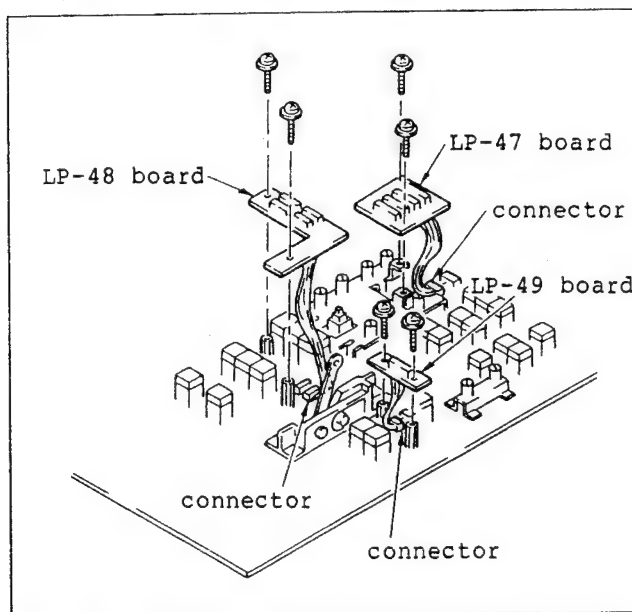
(5) Removing KY-157 board

Remove the brackets A and B, and screws that have been attached.  
Remove the KY-157 board.



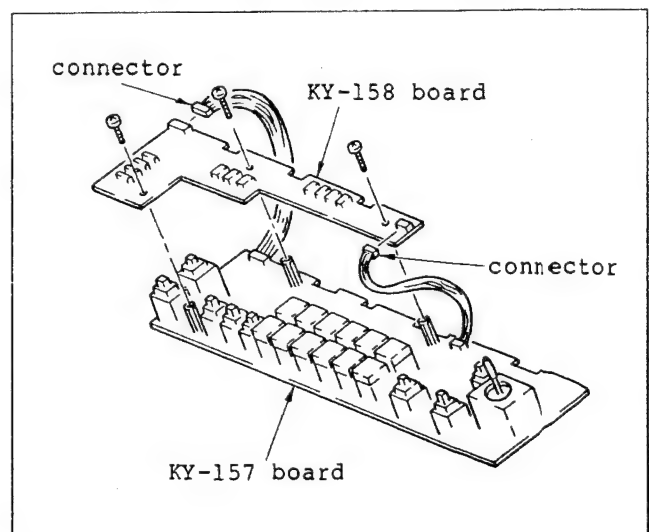
(4) Removing the LP-47, LP-48, LP-49 board

Remove connectors, and the screws that have been attached.  
Remove the LP-47, LP-48 and LP-49 board.



(6) Removing KY-158 board

Remove the two connectors and screws that have been attached.  
Remove the KY-158 board on the KY-157 board.

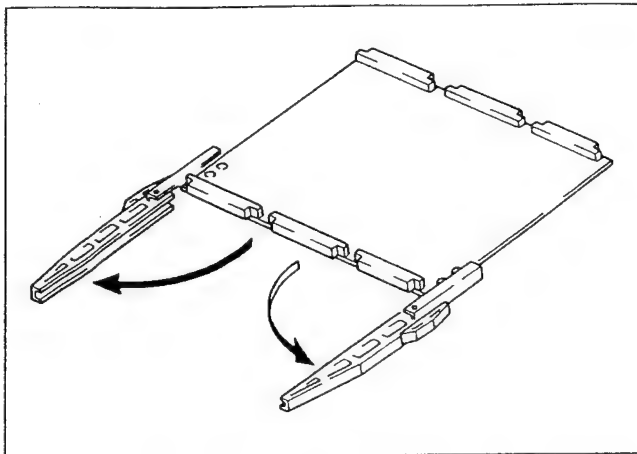


## 2-5. SERVICING PROCEDURE

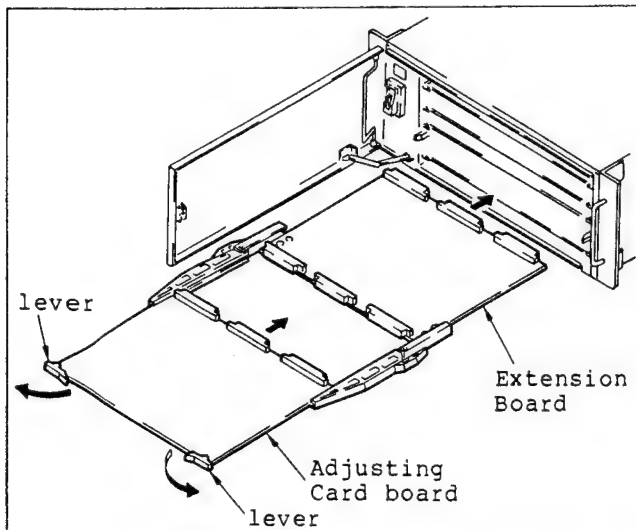
Extension Board; EX-201 Board

Adjusting Card Board; WP-27, SY-138, SD-19A,  
SD-20 and EF-20E  
Boards

- (1) Open the rails for the extension board.



- (2) Push the lever open towards the outside, pull out the adjustment board, and push in the extension board.



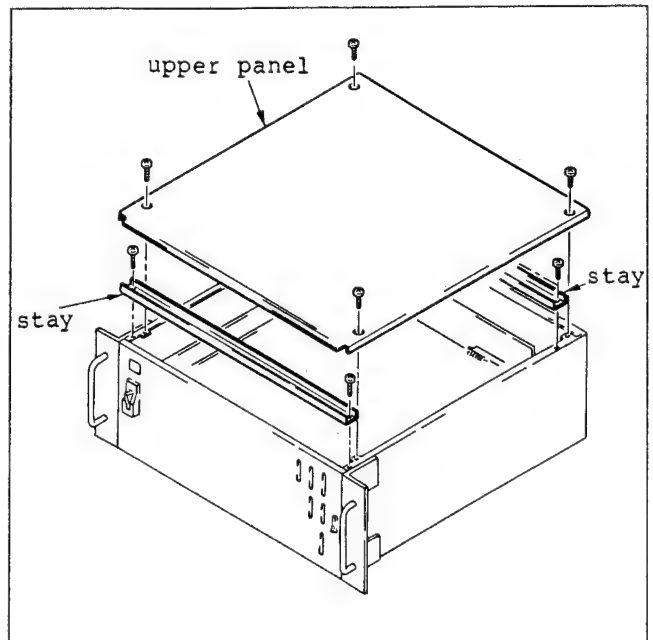
Note) When WP-27 and SY-138 board make the adjustment, connect the WP-27 board and SY-138 board by connect cable of supplied accessory.

## 2-6. REPLACING MAIN COMPONENTS

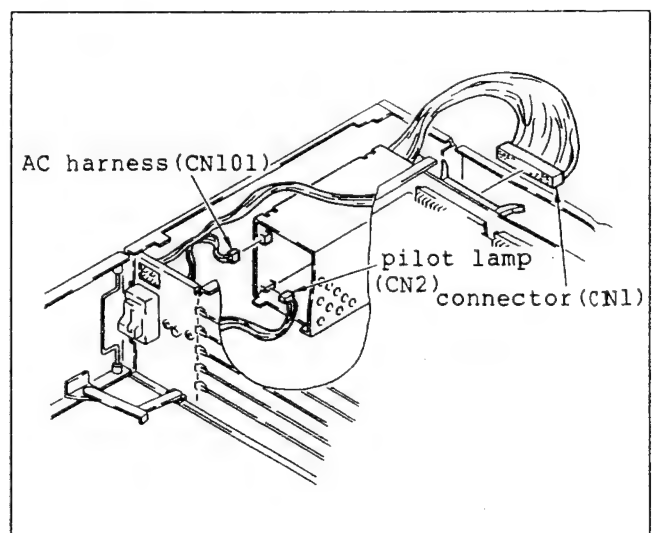
### 2-6-1. Processor

#### Removing the power supply

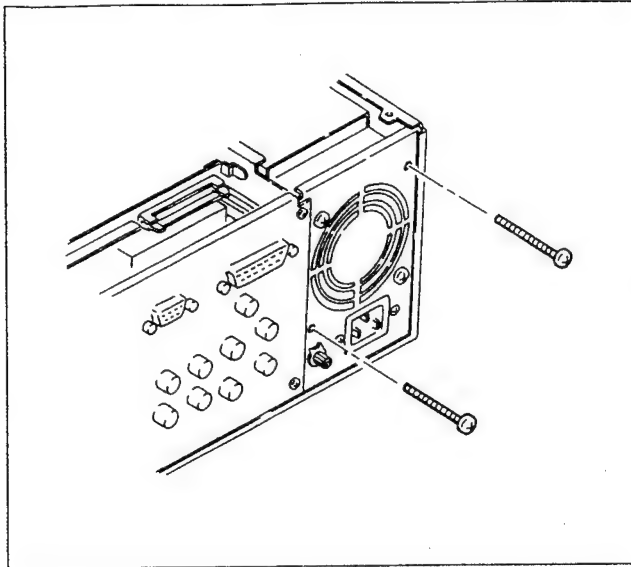
- (1) Remove the upper panel.  
(2) Remove the stays.



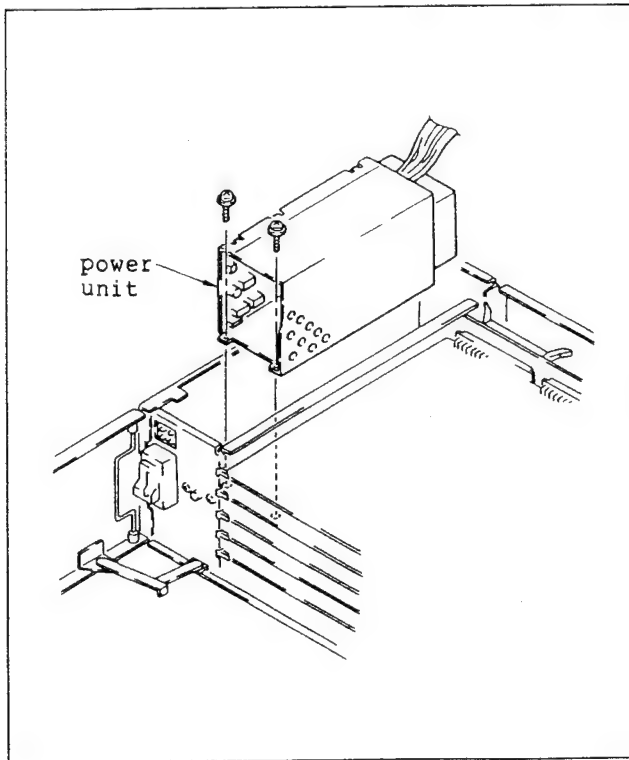
- (3) Remove the AC harness (CN101), the pilot lamp (CN205), and the connector (CN1).



- (4) Remove the screws holding the fan to the rear panel.

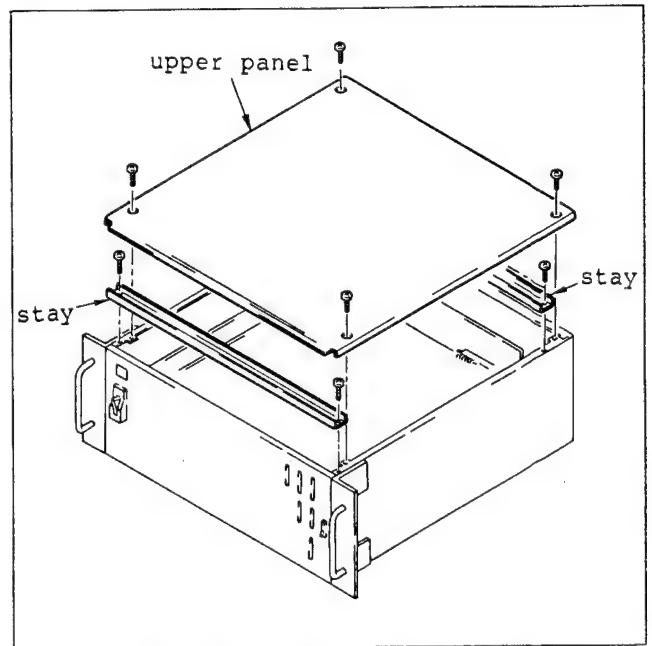


- (5) Remove the screws holding the power supply and then remove the power supply itself.

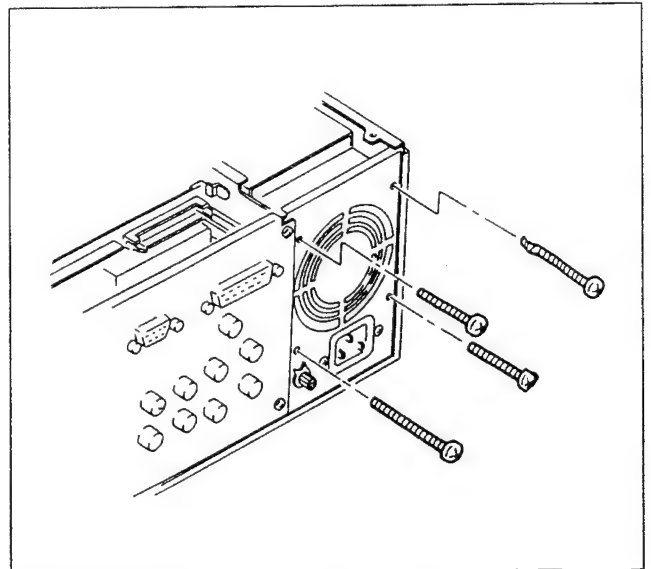


#### Replacing the fan

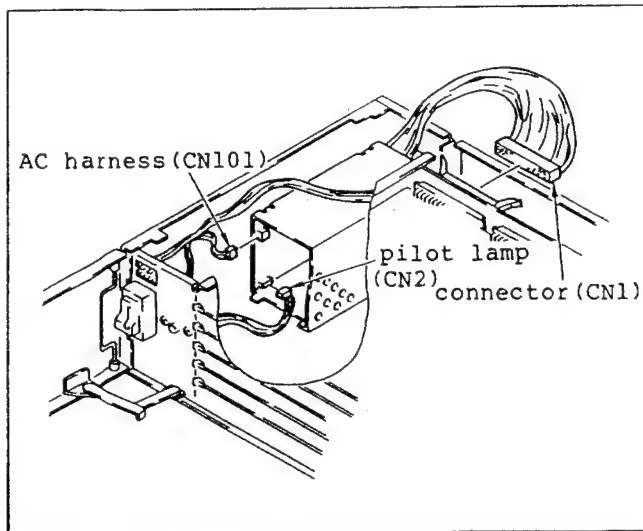
- (1) Remove the upper panel.  
(2) Remove the stay.



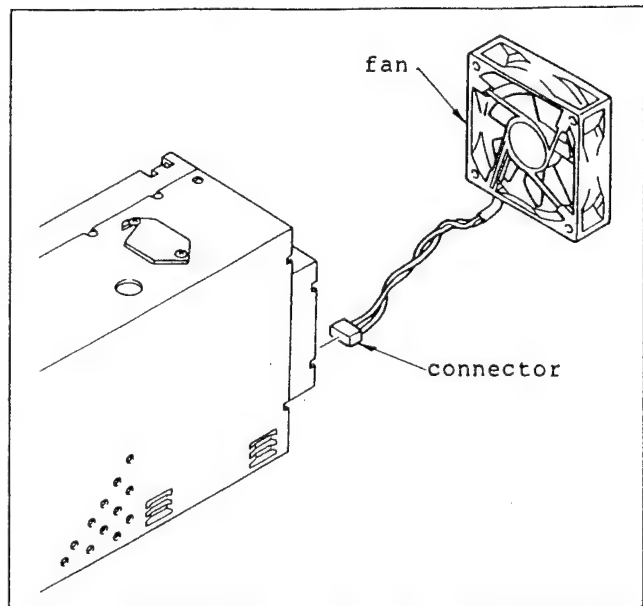
- (3) Remove the screws holding the fan to the rear panel.



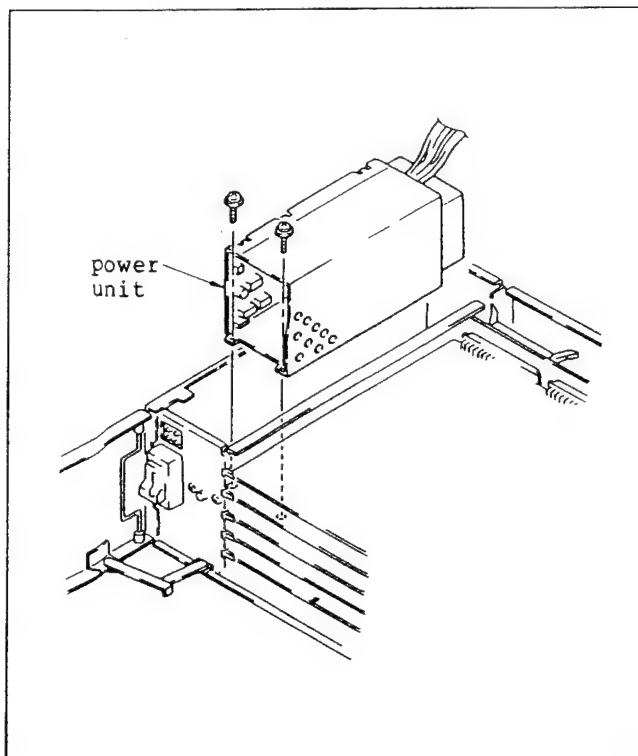
- (4) Remove the AC harness (CN101), the pilot lamp (CN2) and the connector (CN1).



- (6) Remove the connector and the fan.



- (5) Remove the screws holding the power supply and then remove the power supply itself.

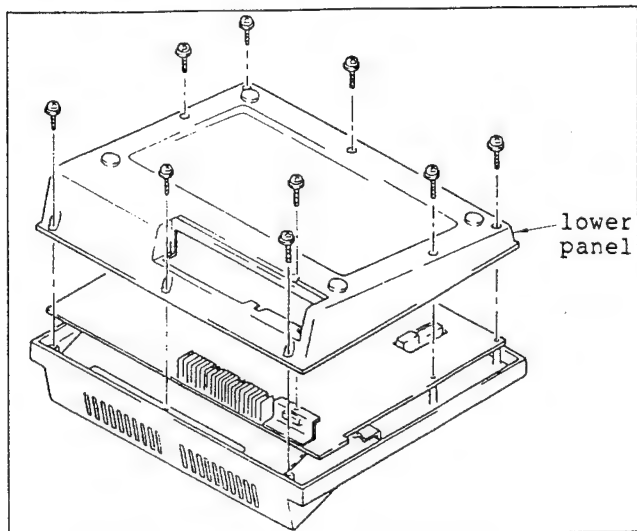




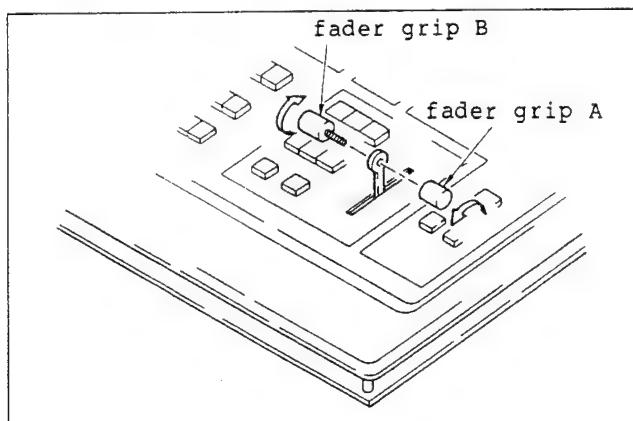
## 2-6-2. Console

### Replacing the fader Assy

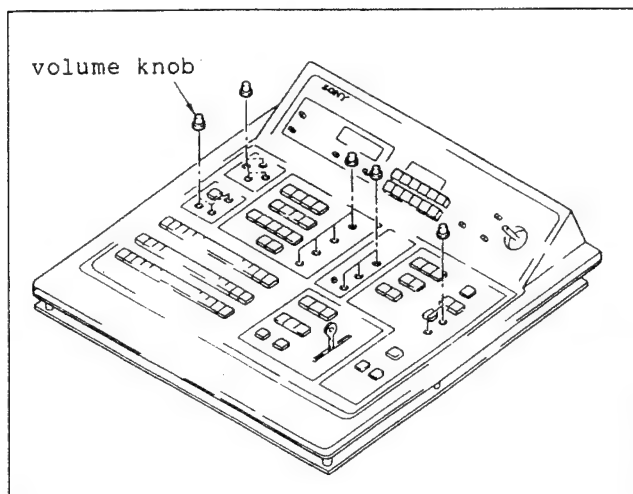
(1) Remove the lower panel.



(2) Remove the fader grip A and B.

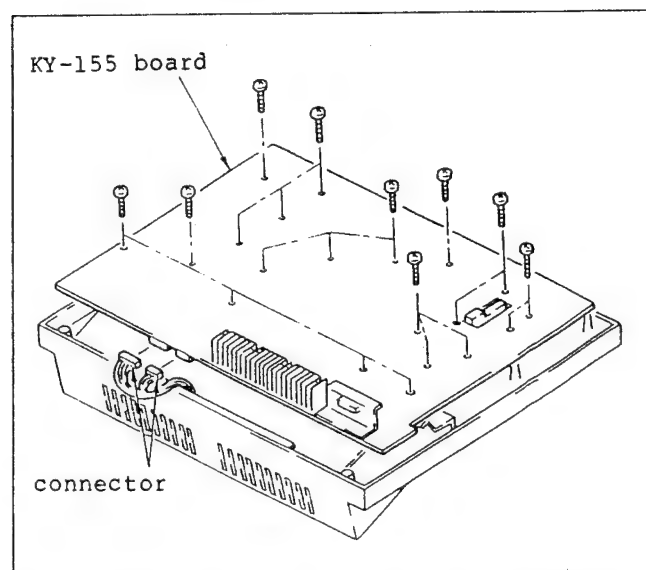


(3) Remove all 15 volume control knobs.

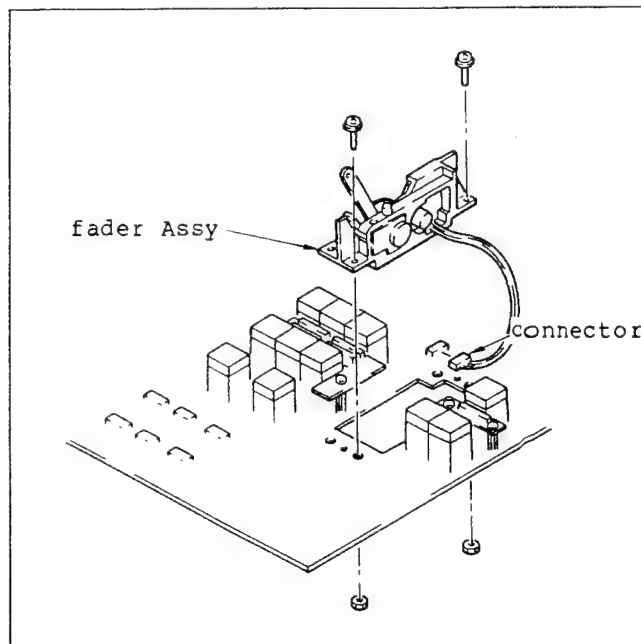


(4) Remove the two connectors and the screws holding the board.

Remove the KY-155A board

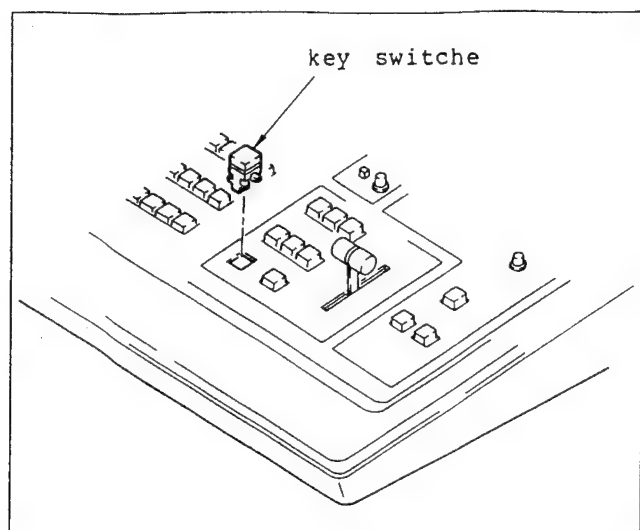


(5) Remove the connector and two screws and replace the fader Assy.

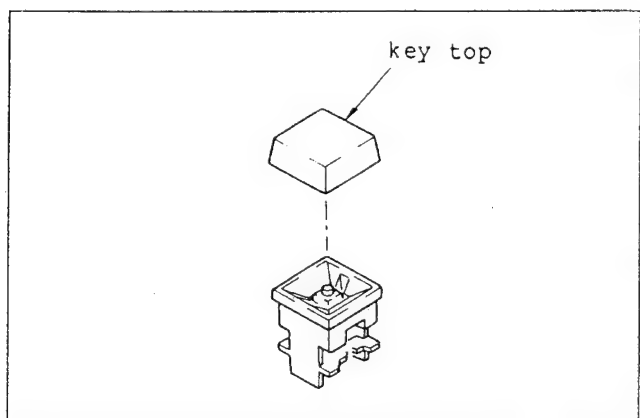


### Replacing the key switch

- (1) Pull out the key switches and remove its.

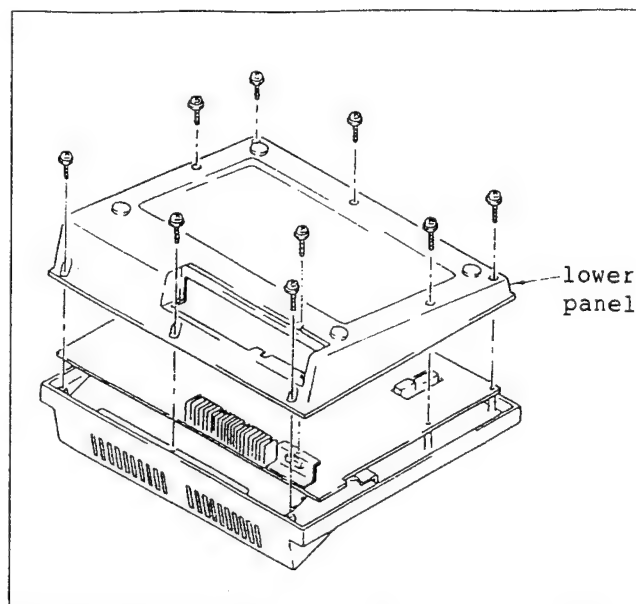


- (2) The side of the switches, and pull out remove the key top.

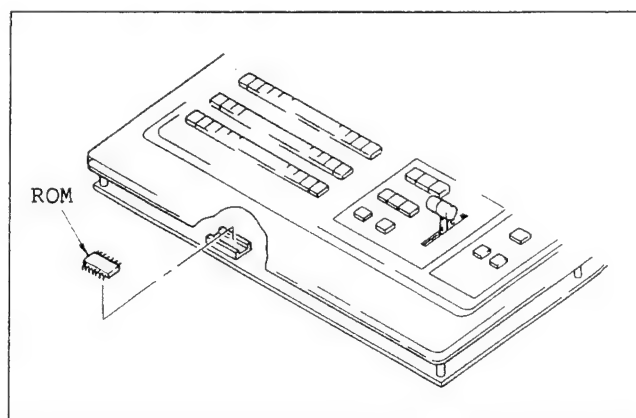


### Replacing the ROM

- (1) Remove the lower panel.



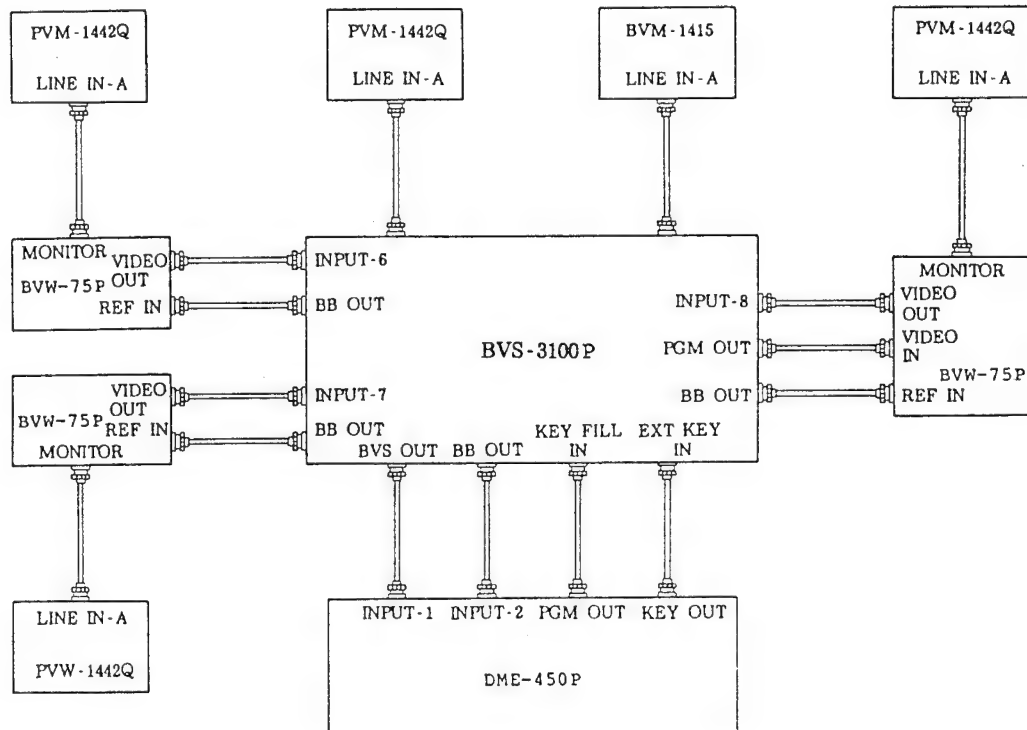
- (2) Replace the ROM.



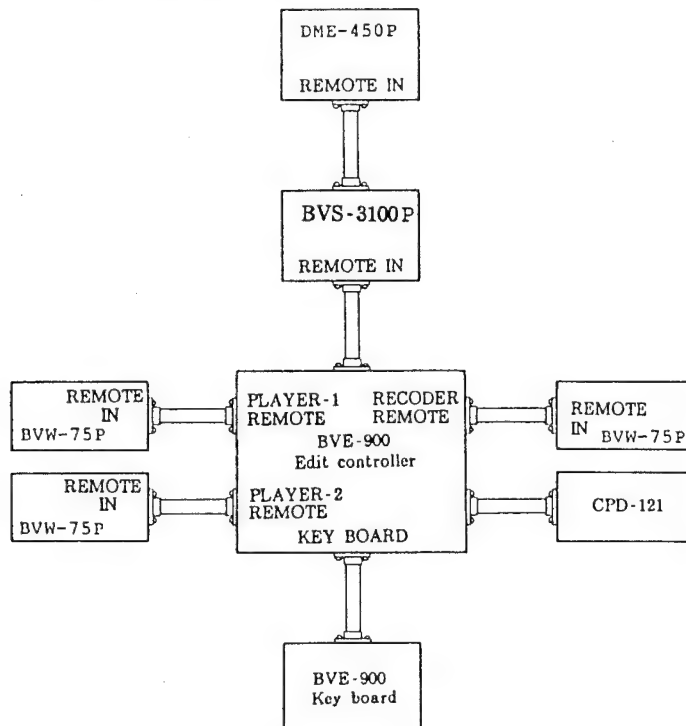
## SECTION 3 TECHNICAL INFORMATION

### 3-1. SYSTEM BLOCK DIAGRAM

#### 3-1-1. Example of an Editing System (Video System)



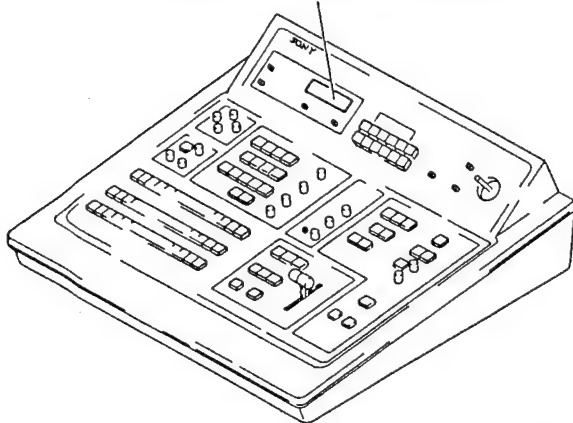
#### 3-1-2. Example of an Editing System (Control System)



### 3-2. SELF-DIAGNOSTICS/STATUS

If any of the following signal numbers appear in the Auto Transition display this represents the corresponding message given.

AUTO TRANSITION DISPLAY



There are six items under the heading STATUS. (See the 3-5, 3-6)

#### (0) "SNAP SHOT"

This function records the status of the control panel of the BVS-3000 Series switcher and allows the information to be retrieved at any time. See the "Operator's Guide" for proper procedure.

**Note:** When setting the "DME-#" to "Min," be sure to set the display of the WIPE LED to "DME-#".

#### (1) "XPT assign"

This function allows the user to define the correspondence between the position of the "BUS" switches on the control panel of the BVS-3000 Series switcher and the "VIDEO IN" signal to be input to the processor. See the "Operation Guide" for proper procedure.

**Note:** A single switch can only be set to correspond to a single input signal. Also, all switches must be redefined whenever a setting change is made.

#### (2) "TALLY assign"

This function allows the user to define the correspondence between the switches on the control panel of the BVS-3000 Series switcher and the TALLY signals. See the "Operation Manual" for proper procedure.

**Note:** A single switch can only be set to correspond to a single port. Also, all switches must be re-defined whenever a setting change is made.

#### (3) "setting"

##### "POSITION center"

In BVS-3000 Series switchers, the center of wipe patterns as well as DME-450P patterns (location during POSITIONER OFF) can be freely set.

- ① Set "STATUS" to 300.
- ② Display the wipe patterns with active positioners on the monitor. (Ex. 21/24/23)
- ③ Set the "POSITIONER" switch to "ON" and move the center of the pattern to the desired location using the joystick.
- ④ Set the "POSITIONER" switch to "OFF". (Setting complete.) When making pattern location settings for the DME-450P, be sure to select the proper DME-450P pattern number (Ex. #1100) in step 2 above.

#### **"DME-450P auto setup"**

"KEY" operations are executed on the BVS-3000 Series switcher side when DME-450P patterns are executed from that switcher. For this reason, SOURCE/ FILL/KEY-ON, etc., are set automatically when DME patterns are selected.

The setting parameter at this time can be freely selected.

The parameter specifies whether KEY ON is to be automatically executed when KEY-1/KEY-2/DSK/KEY-SOURCE/KEY-FILL and DME patterns are selected.

- ① Set "STATUS" to 301.
- ② Decide which "KEY" processor will execute DME patterns.
- ③ Set the switches/LEDs for SOURCE/ FILL/KEY-1/(KEY-2/DISK)/KEY-ON (DISK-ON). If the user does not plan to set the KEY-ON (DSK-ON) LED, only the SOURCE/FILL setting is needed.
- ④ Press the "CUT" switch. (Setting complete.)

**Note:** When making the "KEY-ON" setting during auto setup, the "TITLE" mode of DME-450P patterns can be turned "ON" by turning the KEY "CLIP" knob fully counterclockwise, or "OFF" by turning it full clockwise. In any case, normal effects can be obtained with the CLIP" knob in the center position.

#### **(6) "status"**

The five types of operational status possible for BVS-3000 Series switchers can be displayed in this mode.

##### **"POWER unit emergency"**

If status is normal, the LED display reads 600 when set to 6x0.

If there is a malfunction (an abnormal rise in temperature) of the power supply unit in the processor of the BVS-3000 Series switcher, the LED display will read 610 and a buzzer will sound continuously.

Be sure to quickly turn the power switch "OFF" if this display appears.

##### **"memory backup"**

If status is normal, the LED display reads 601 when set to 6x1.

If the "SNAP SHOT" memory backup power supply voltage level in the processor of the BVS-3000 Series switcher drops and the data held in memory is lost, the LED display will read 611.

All BVS-3000 Series switchers use a capacitor of high-storage capacity as a backup power supply and data can be stored for 3 to 4 weeks on a 4 hour charge. The capacitor is charged while the BVS-3000 Series switcher power is "ON".

The microcomputer in the processor automatically writes data corresponding to the initial settings to the capacitor if the data held in memory is lost.

#### **"DME-450P control"**

If the BVS-3000 Series switcher is operating independently (not in control of a DME-450P), the LED display is 602 when set to 6x2.

Control (remote control) of the DME-450P is possible by setting the "EDITOR ENABLE" switch on the BVS-3000 Series switcher to "ON" and then setting the DME pattern number. The LED display will then read 612.

#### **"asynchronous input video"**

If the input video signal selected using the PGM-BUS switch of the BVS-3000 Series switcher is synchronous with respect to that switcher (signal genlocked), the LED display reads 603 when set to 6x3.

If the input video signal selected with the PGM-BUS switch is either missing or asynchronous, the LED display will read 613 and the PGM-BUS switch will begin to flicker. If a synchronous input video signal is selected, the switch will stop flickering and the LED display will again return to 603.

#### **"control panel communication"**

If the status of the communication line between the control panel and the processor of the BVS-3000 Series switcher is normal, the LED display reads 604 when set to 6x4.

If communication on this line is not possible, the LED display will read 614 and a buzzer will sound continuously.

If this occurs, turn the BVS-3000 Series switcher's power off once and then back on again.

#### **(9) "check"**

##### **"lamp check"**

The lamps of the switches on the control panel of the BVS-3000 Series switcher will be lit one by one and checked when the LED display is set to 900 and then the "CUT" switch is pressed.

The status of the control panel will return to normal after the last lamp test ("DSK MIX") has been completed.

Press the "CUT" switch a second time to halt the lamp test in the middle.

##### **"XPT-flicker"**

In this mode, the crosspoint is automatically adjusted when the phase of the input video signal is aligned with that of the BVS-3000 Series switcher. See the "Operation Manual" for proper procedure.

	(#xxx)	(#xx)	(#x)	(memo)
0; SNAP SHOT	0: Min	0 9; reg #		"cut"; execute
	1; MR			
1; XPT assign	0 9; input #	0; (non)		"PGM"; assign
2; TALLY assign	1 8; port #	0; (non)		"PGM"; assign
3; setting	0; Min	0; POSITION		"POSITIONER"; "OFF"
	1; MR	center		
	0; Min	1; "DME-450P"		
	1; MR	auto setup		

execute assign				
"KEY ON"; auto setup				
"XPT" auto setup				
used KEY	FILL	SOURCE		
KEY-1	<div>EXT VIDEO 1</div> <div>SW on</div> <div>or</div> <div>EXT VIDEO 2</div> <div>SW on</div>	<div>EFF EXT 1</div> <div>SW on</div> <div>or</div> <div>EFF EXT 1</div> <div>SW on</div>	<div>KEY-1</div> <div>(NEXT-TRNS)</div> <div>SW on</div>	<div>[KEY ON]</div> <div>(NEXT-TRNS)</div> <div>LED on</div>
KEY-2	<div>EXT VIDEO 1</div> <div>SW on</div> <div>or</div> <div>EXT VIDEO 2</div> <div>SW on</div>	<div>EFF EXT 1</div> <div>SW on</div> <div>or</div> <div>EFF EXT 1</div> <div>SW on</div>	<div>KEY-2</div> <div>(NEXT-TRNS)</div> <div>SW on</div>	<div>[KEY ON]</div> <div>(NEXT-TRNS)</div> <div>LED on</div>
DSK	<div>EXT VIDEO</div> <div>SW on</div>	<div>DSK EXT</div> <div>SW on</div>	<div>DSK PVW</div> <div>SW on</div>	<div>[DSK ON]</div> <div>LED on</div>

CUT

(EFF TRNS)  
SW

<b>6; status</b>	0; NORM	0; POWER-unit	with "BUZZER"
	1; EMERGENCY	emergency	&
			LED flicker
	0; NORM	1; memory backup	
	1; INITIAL		
	(empty)		
	0; NORM	2; "DME-450P"	
	1; LINK	control	
	0; SYNC (norm)	3; input synchro	
	1; other	center	
	0; NORM	4; conpane <=> mainframe	with "BUZZER"
	1; fail	communication	&
			LED flicker
<b>9; check</b>	0; lamp check	0; lamp check	"cut"; start/stop
	1; XPT-flicker	0; PGM/PST-XPT	"cut"; start/stop
		1; EFF-KEY FILL-XPT	"cut"; start/stop
		2; DSK-KEY FILL-XPT	"cut"; start/stop



**SONY.**

VIDEO SWITCHER

MAINTENANCE MANUAL  
Volume 2 1st Edition  
Serial No.10001 and Higher

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## 9. SPARE PARTS AND FIXTURE

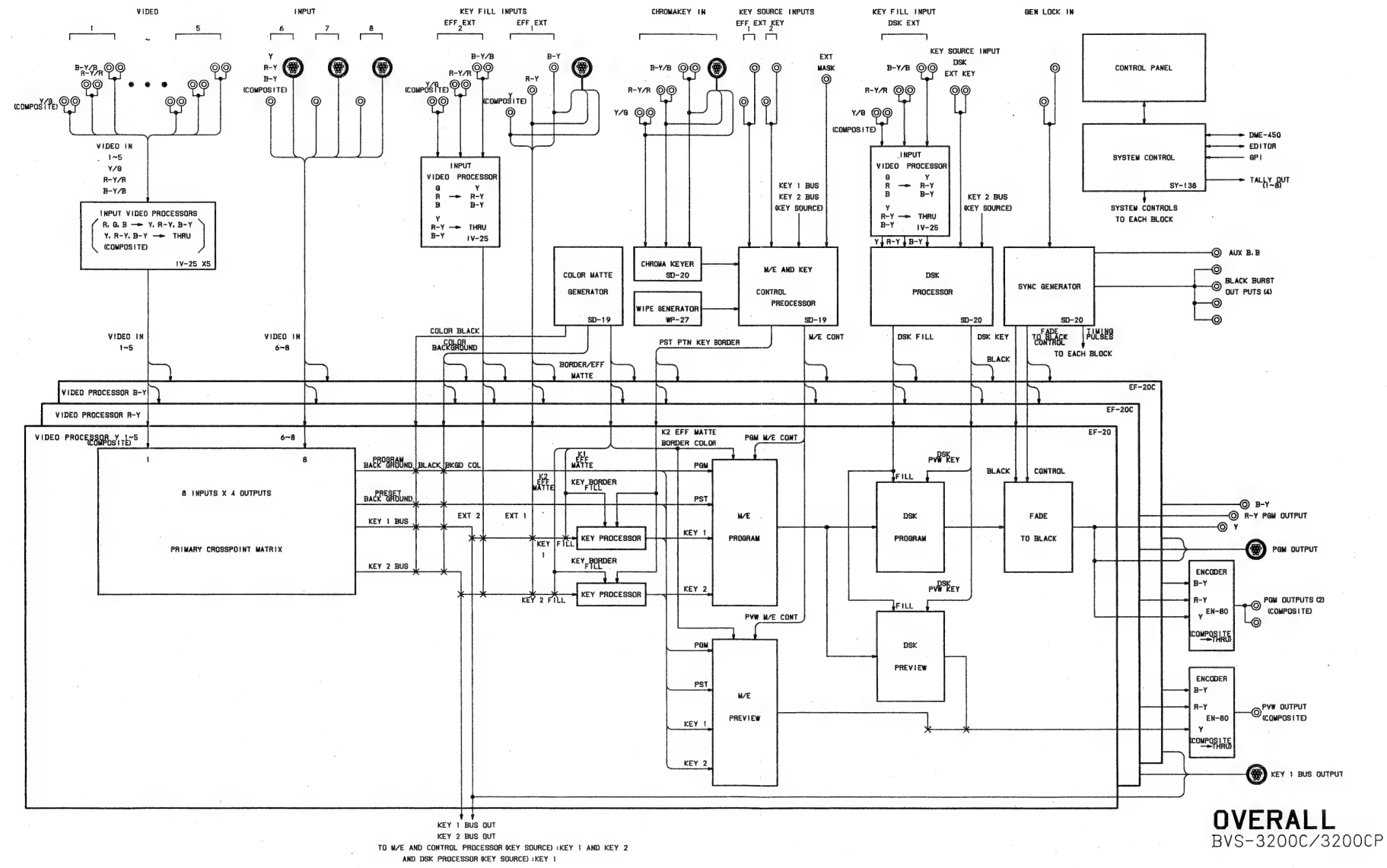
9-1. Parts Information .....	9-1
9-2. Exploded View .....	9-1
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BLOCK DIAGRAMS

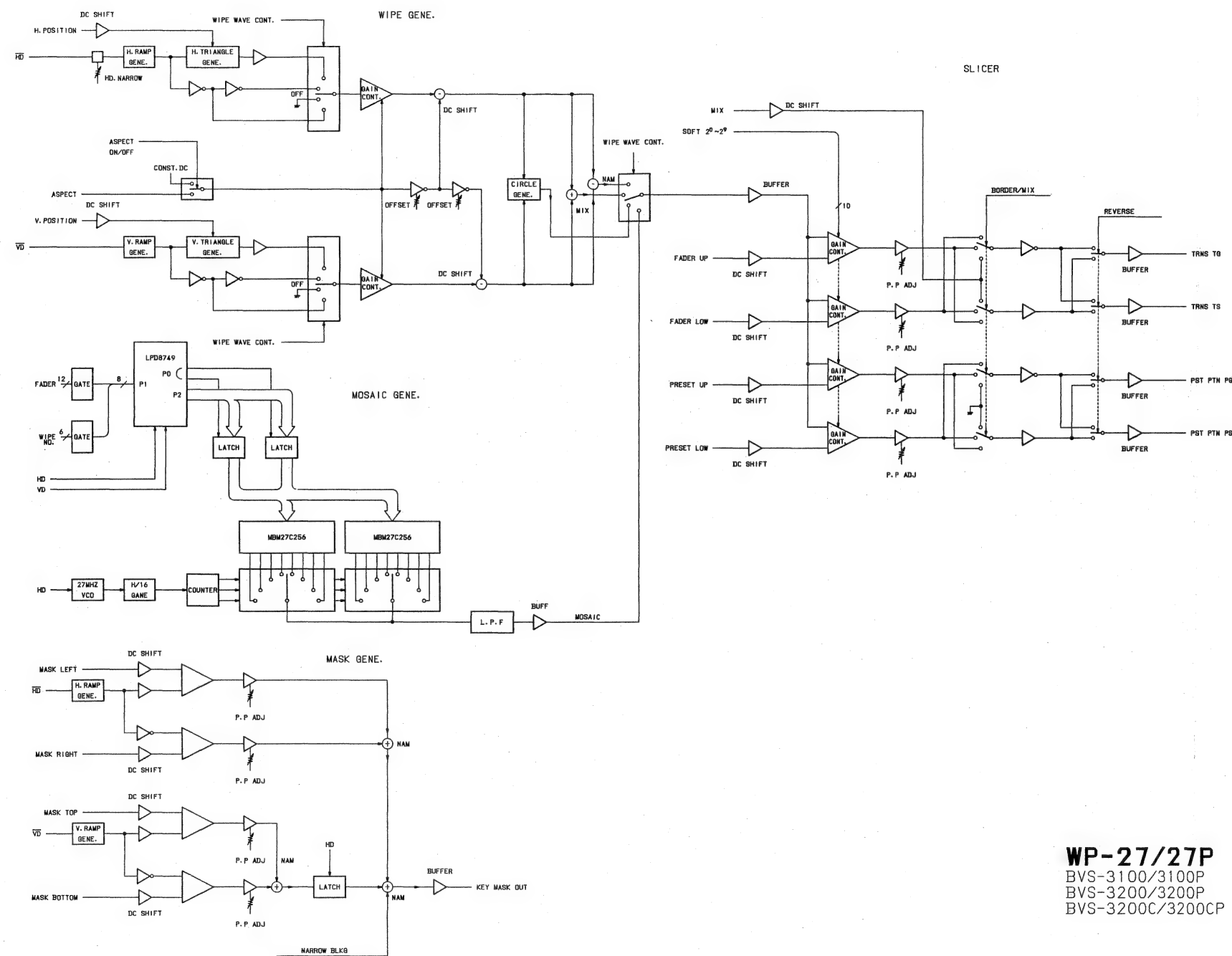
# PROCESS OVERALL

# OVERALL PROCESS

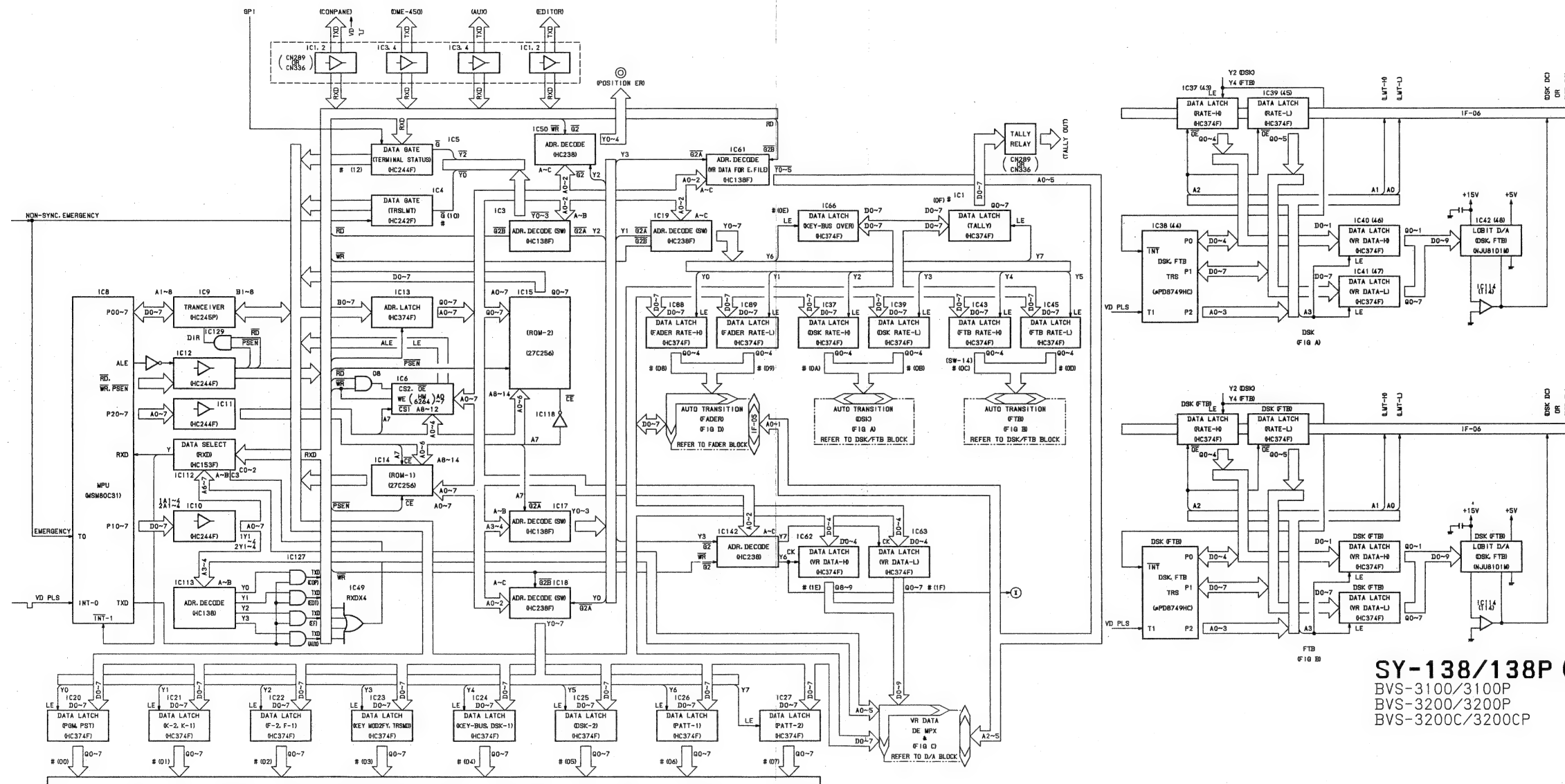
## OVERALL



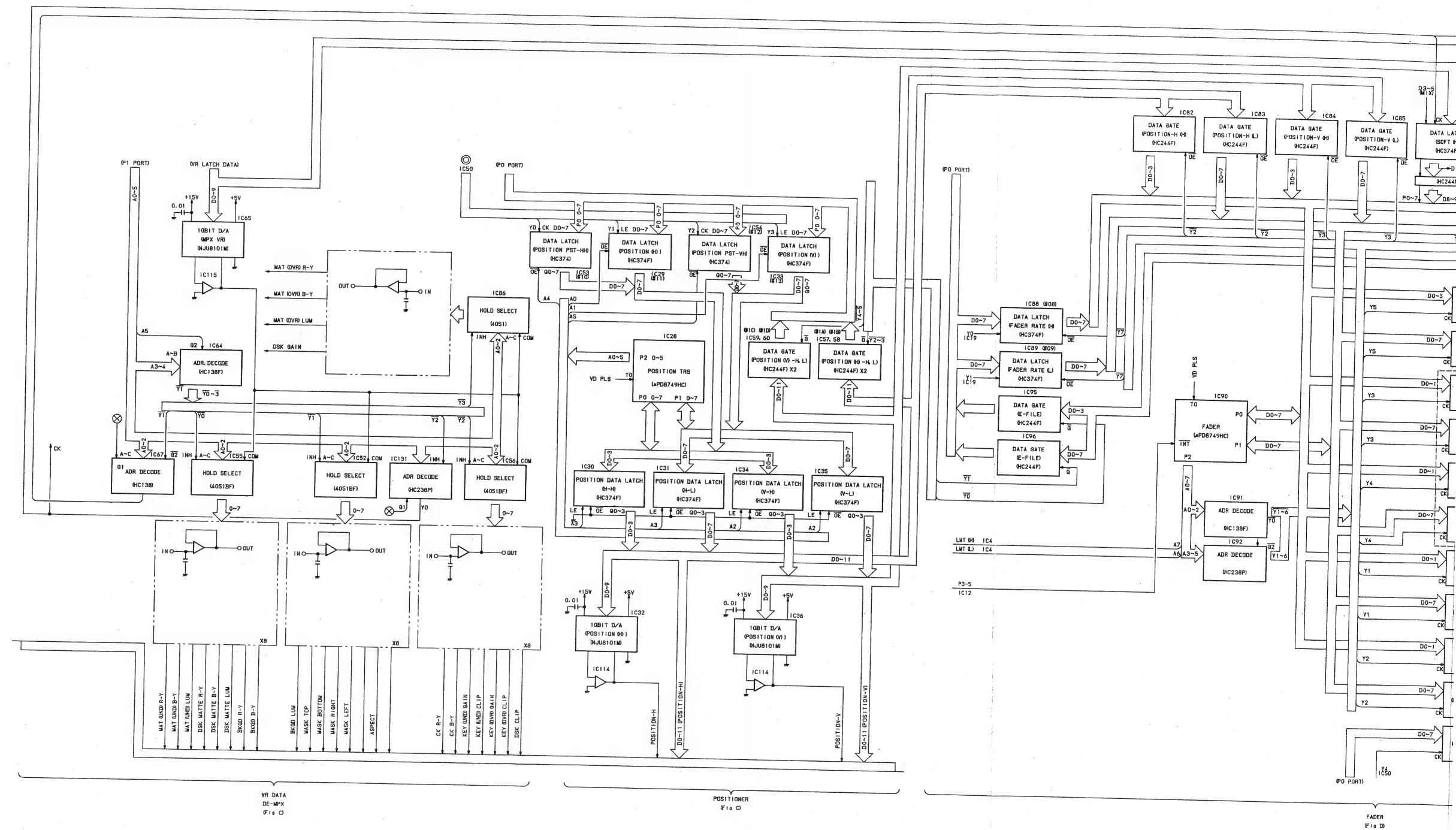
## WIPE SIGNAL GENERATOR

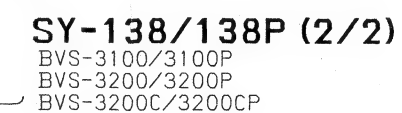


## SYSTEM CONTROL (1/2)

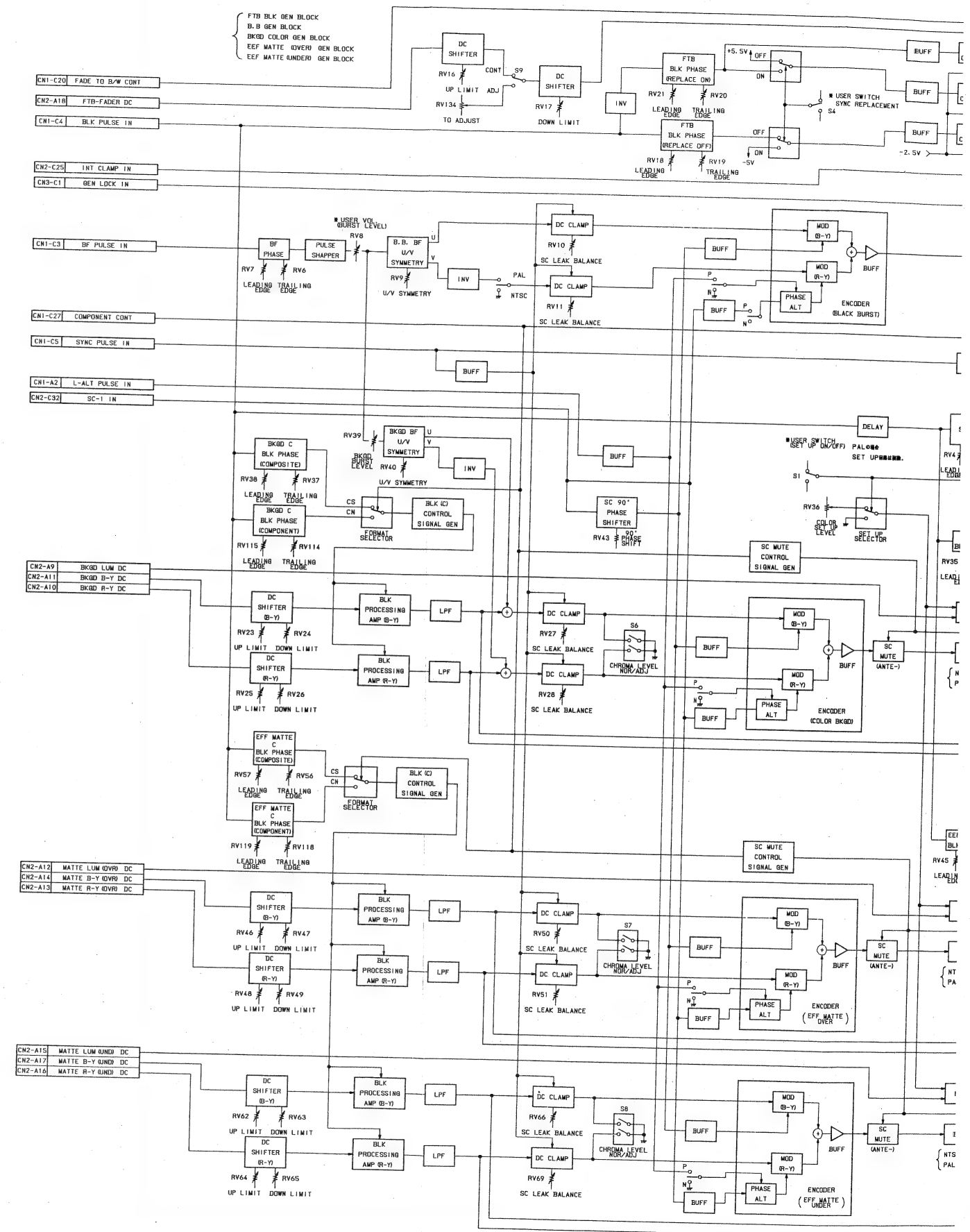


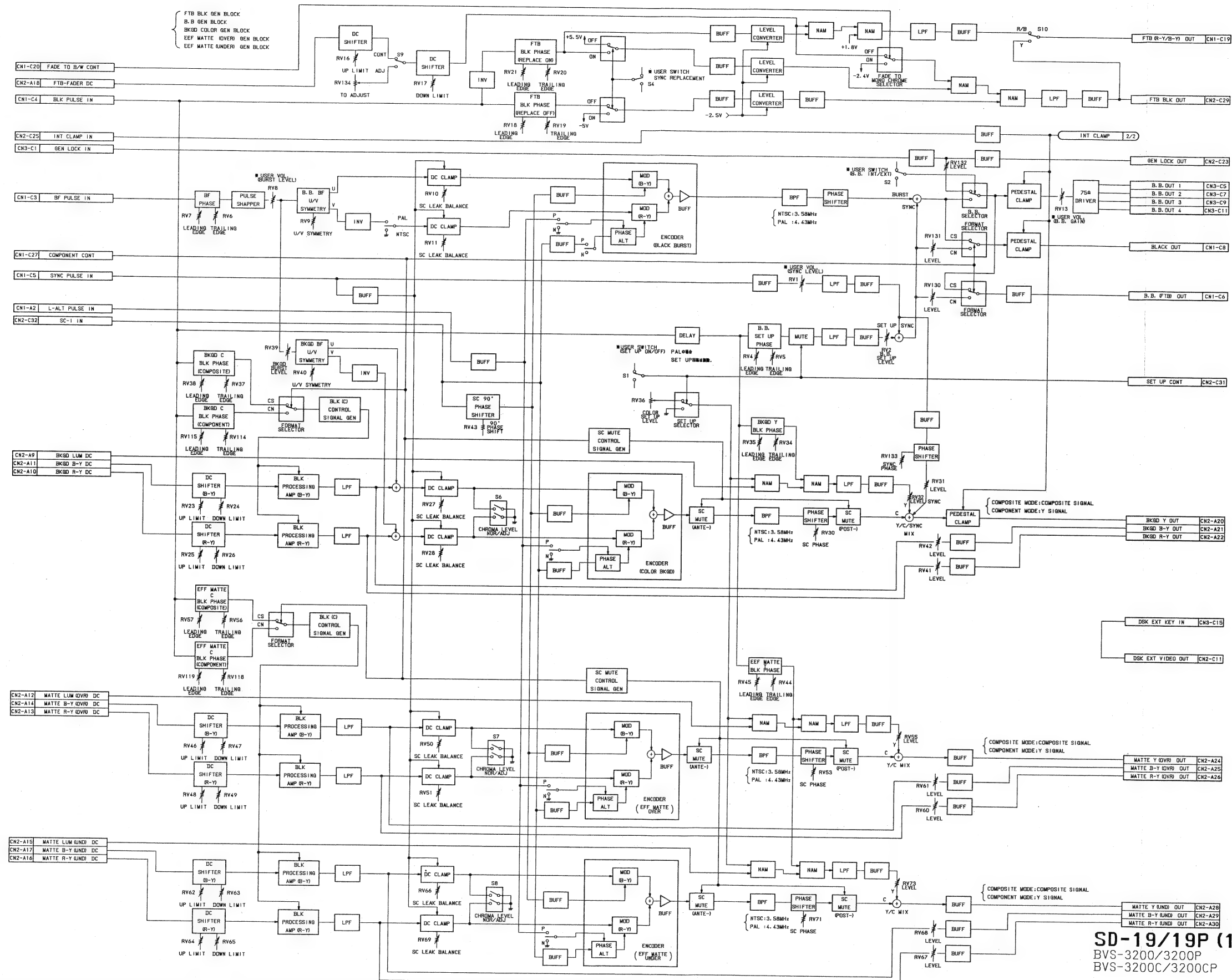




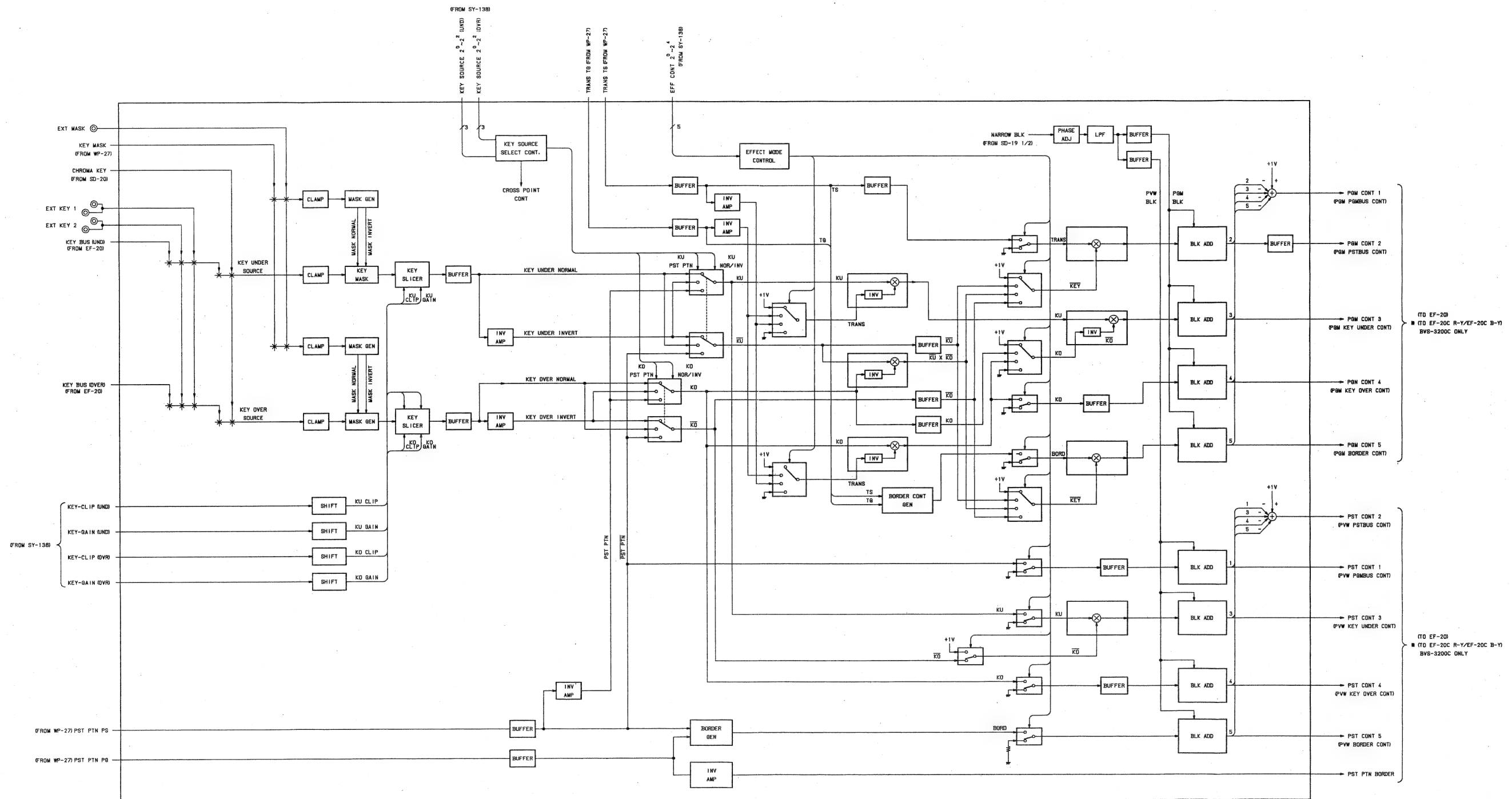


## SD-19



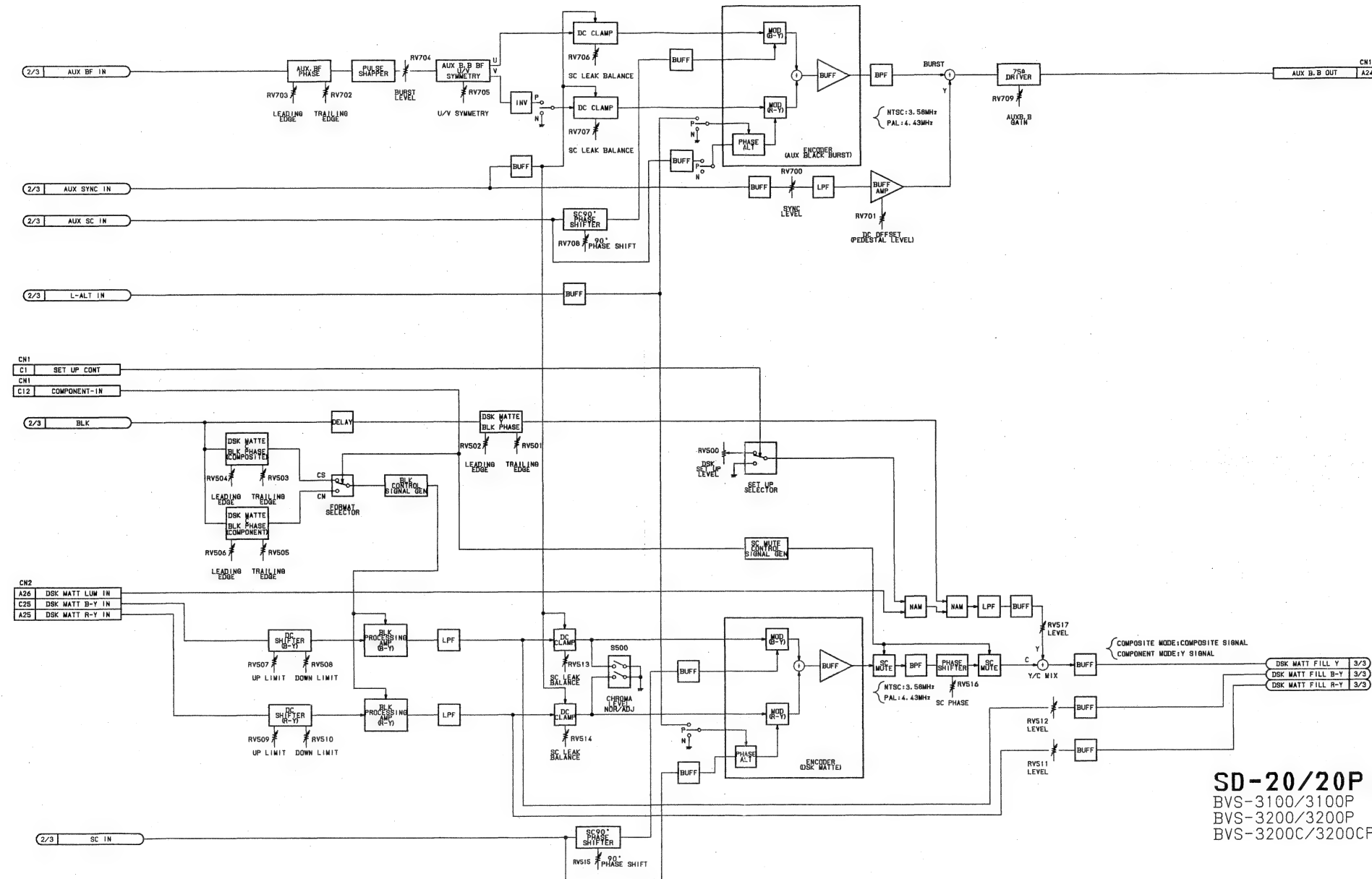


## SIGNAL GENERATOR FOR SIGNAL PROCESSOR (2/2)



SD-19/19P (2/2) 6  
BVS-3200/3200P  
BVS-3200C/3200CP

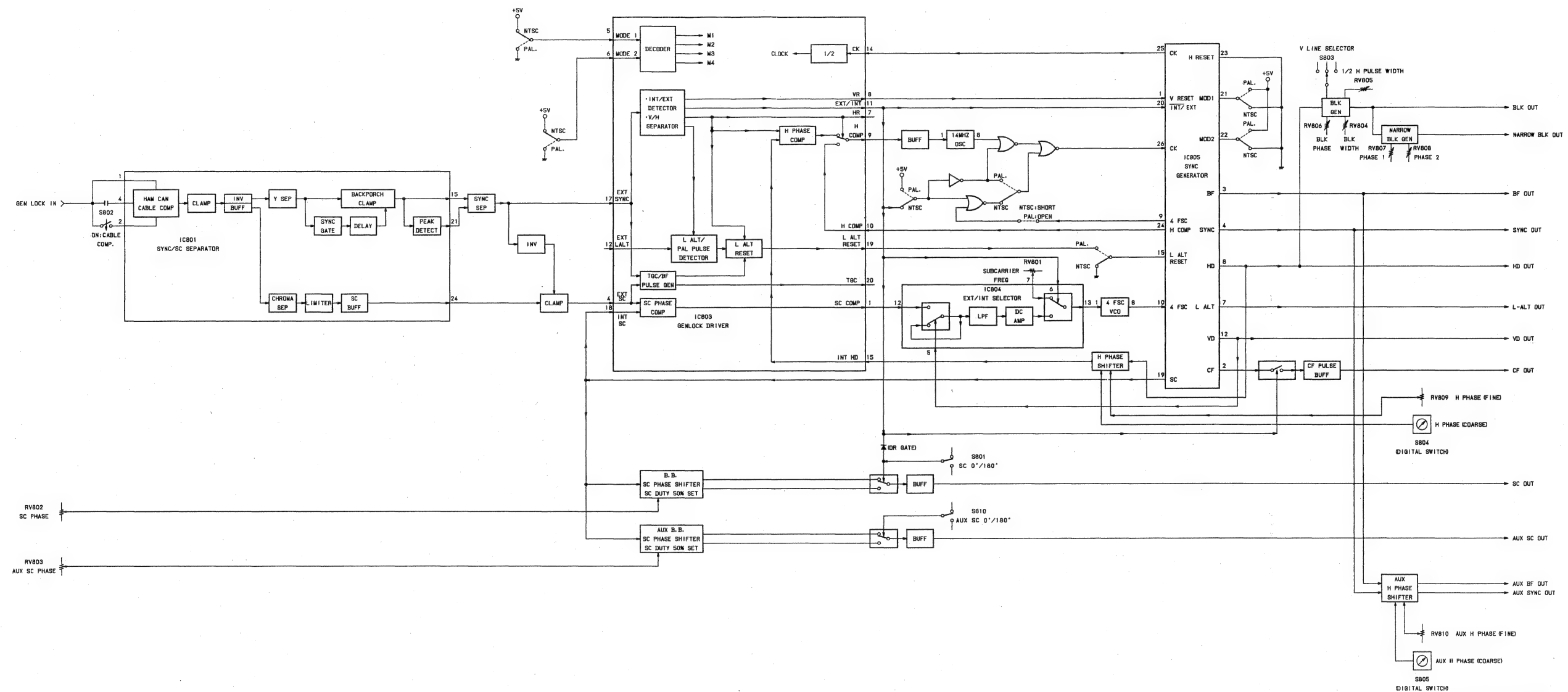
## SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR (1/3)



SD-20/20P (1/3)

BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP

SYNC GENERATOR  
CHROMA KEY  
DOWN STREAM KEY  
SIGNAL GENERATOR (2/3)



SD-20/20P (2/3)

BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP

The diagram illustrates the video processing section of a VHS VCR, showing the flow from input signals to video output and key signals.

**Inputs:**

- DSK INV.
- DSK CLIP DC
- DSK GAIN DC
- DSK EXT KEY KEY BUS
- NARROW BLKG.
- SHADOW CONT.
- BORDER CONT.
- SHADOW CONT.
- OUTLINE CONT.
- DSK CM (Y)
- EXT VIDEO (Y)
- DSK CM (R-Y)
- EXT VIDEO (R-Y)
- DSK CM (B-Y)
- EXT VIDEO (B-Y)
- DSK FADER DC
- KEY PST
- KEY PGM

**Processing Blocks:**

- DSK CLIP DC** and **DSK GAIN DC** are processed by a **CLAMP** block.
- DSK EXT KEY KEY BUS** is processed by a **DSK EXT KEY** block.
- NARROW BLKG.** is processed by a **NAM** block.
- SHADOW CONT.** is processed by an **A/D CONV.** block.
- BORDER CONT.**, **SHADOW CONT.**, and **OUTLINE CONT.** are processed by a **V. OUTLINE & V. SHADOW, V. BORDER CONT.** block.
- DSK CM (Y)** and **EXT VIDEO (Y)** are processed by a **600 NSEC DLY. ADJ.** block.
- DSK CM (R-Y)** and **EXT VIDEO (R-Y)** are processed by a **180 (1/20) NSEC DLY** block.
- DSK CM (B-Y)** and **EXT VIDEO (B-Y)** are processed by a **180 (1/20) NSEC DLY** block.
- DSK FADER DC** is processed by a **DSK FADER** block.
- KEY PST** and **KEY PGM** are processed by a **KEY** block.

**Outputs:**

- CRK OUT**
- FILL Y**
- FILL R-Y**
- FILL B-Y**
- KEY PST**
- KEY PGM**

**SD-20/20P (3/3)**  
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP



## 1



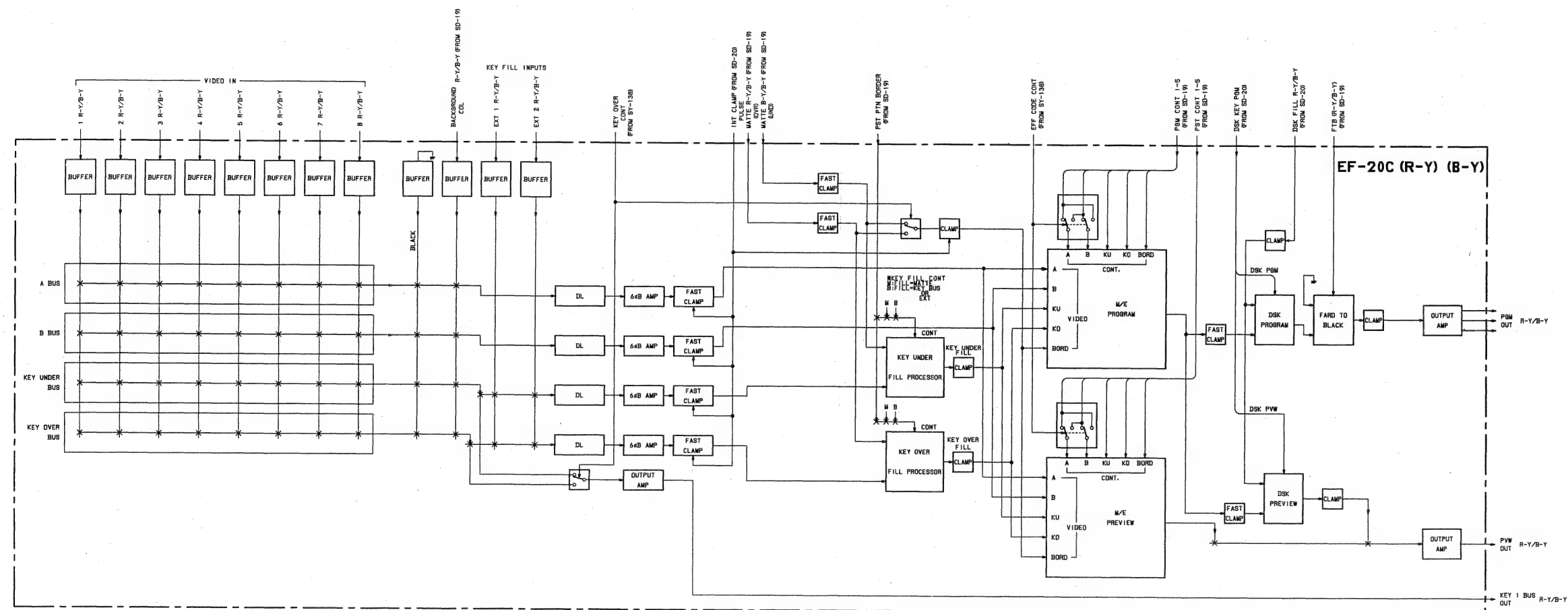
3

4

5

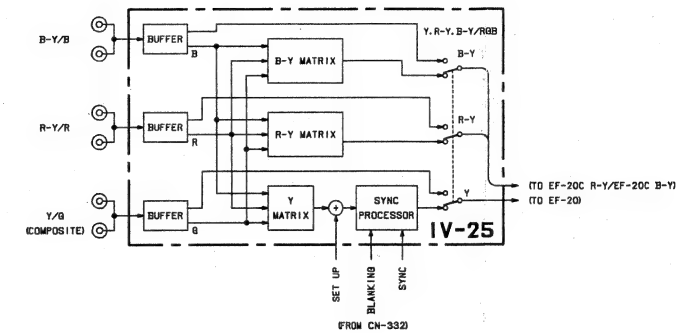
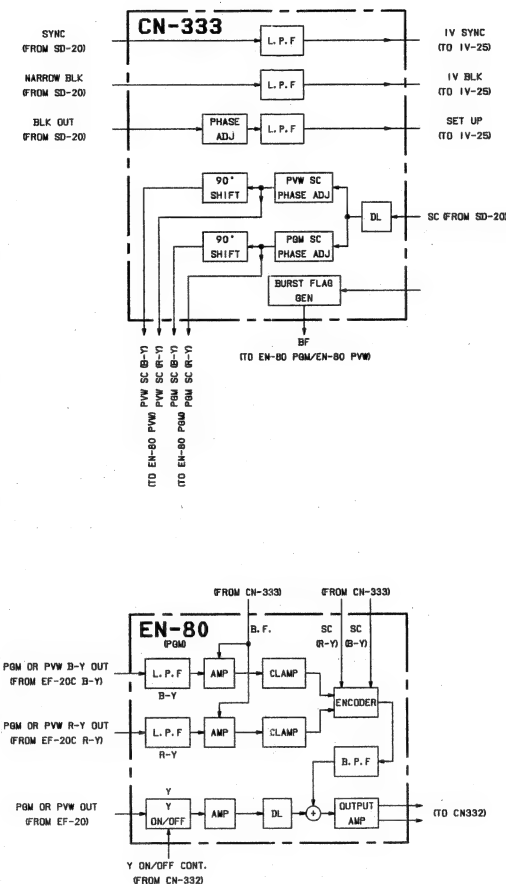
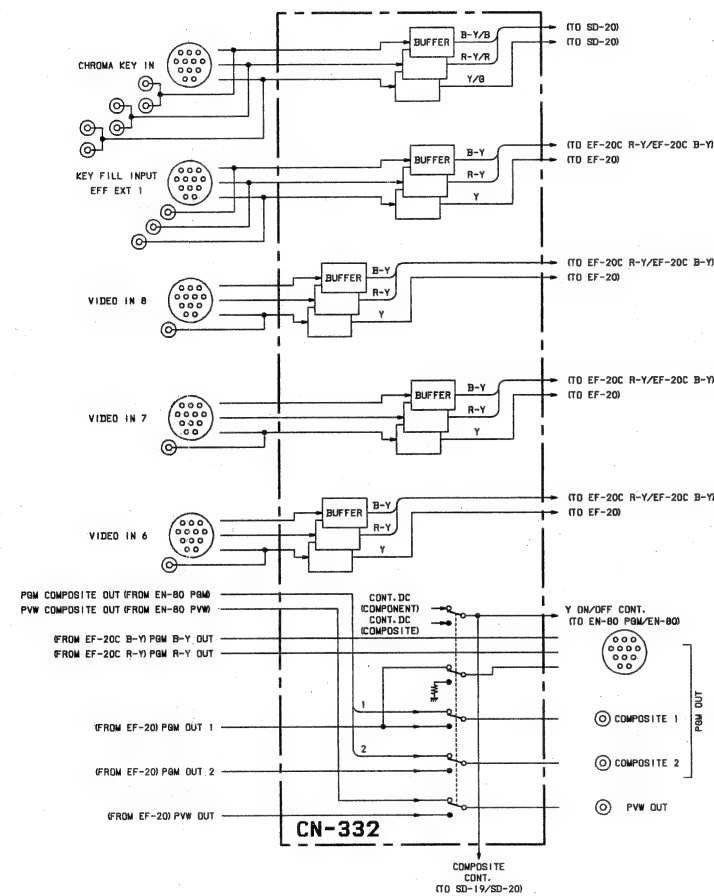
6

B-Y (R-Y) SIGNAL PROCESSOR



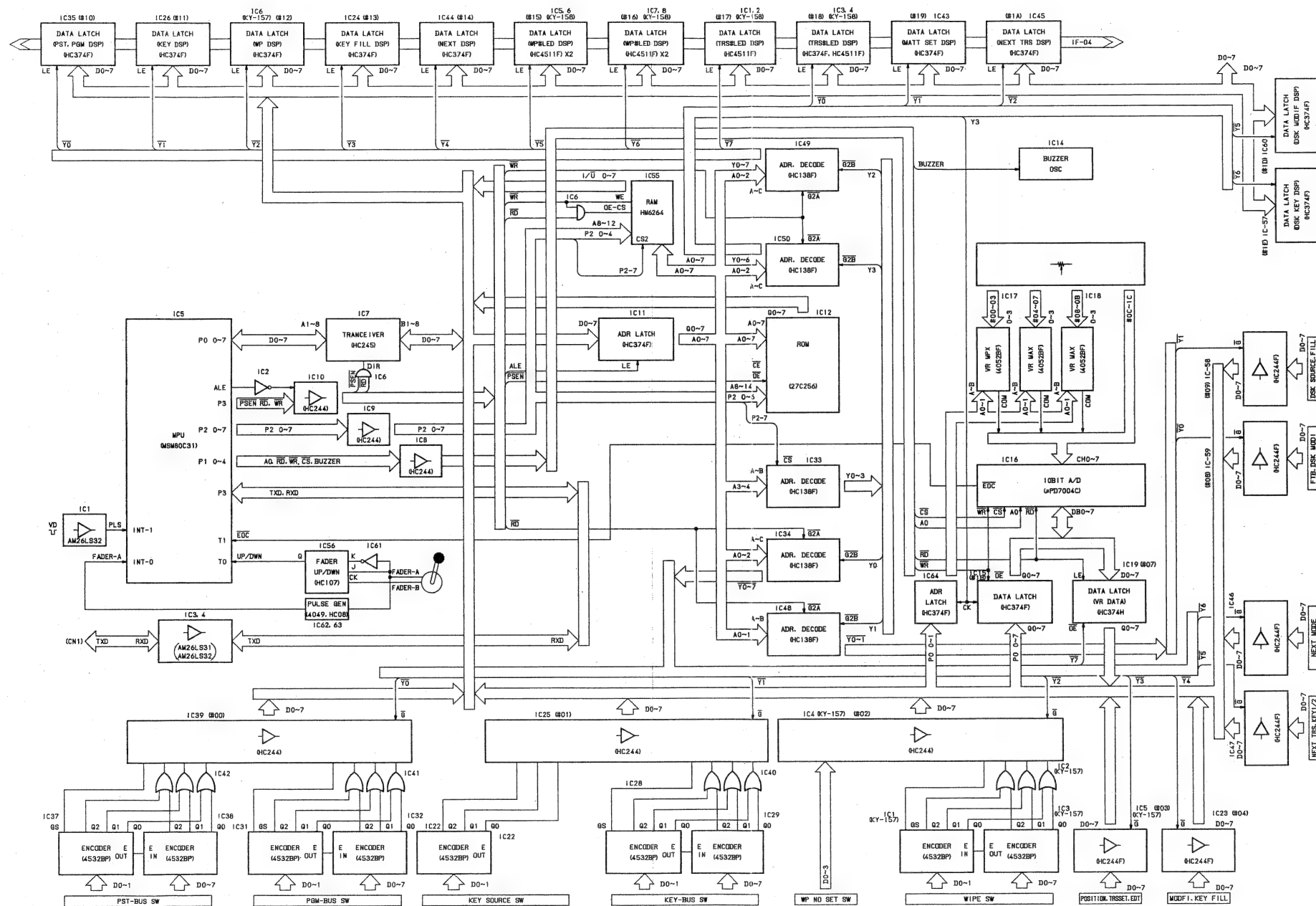
EF-20C/20CP  
BVS-3200C/3200CP

## CONNECTOR ENCODER MODE SET FOR INPUT VIDEO SIGNAL



CN-332 CN-336  
EN-80/80P IV-25/25P  
BVS-3200/3200P

CONSOLE



**CONSOLE**  
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP

## SECTION 6

### SEMICONDUCTOR ELECTRODES

ここに記載されている IC, トランジスタ, ダイオードは, それぞれの機能を等価的に表わしたものです。したがって互換性を表わすものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は, SPARE PARTS の章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

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TC74HC245AF .....	6-18
TC74HC373F .....	6-14
TC74HC4028F .....	6-18
TC74HC4049F .....	6-9
TC74HC574F .....	6-15
TC74HC86F .....	6-15
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TL084CNS .....	6-18
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LD701MG .....	6-21
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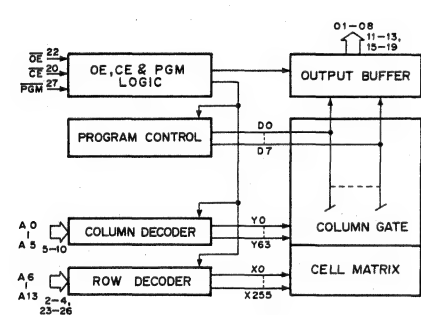
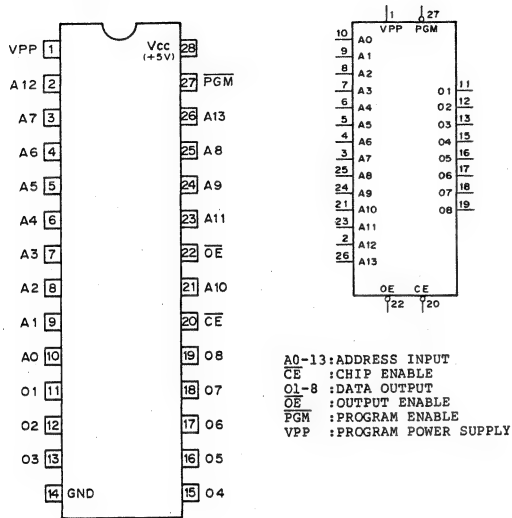
等価回路は IC メーカーの Data Book に従いました。

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

27C128-25 (INTEL) (ACCESS TIME = 250ns)

C-MOS 131,072-BIT EPROM

- TOP VIEW -



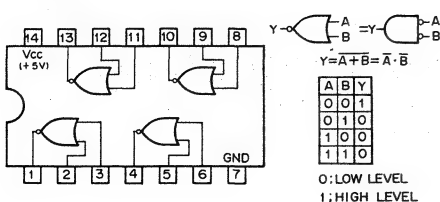
MODE	TERMINAL	DATA OUTPUT	CE	OE	PGM	VPP
READ		DATA OUT	0	0	1	+5V
OUTPUT DISABLE		HIGH IMPEDANCE	0	1	1	+5V
OUTPUT DISABLE		HIGH IMPEDANCE	0	0	0	+5V
STANDBY		HIGH IMPEDANCE	1	X	X	+5V
PROGRAM		DATA IN	0	1	0	+21V
PROGRAM VERIFY		DATA OUT	0	0	1	+21V
PROGRAM INHIBIT		HIGH IMPEDANCE	1	X	X	+21V

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

74F02PC (FSC)

TTL 2-INPUT POSITIVE-NOR GATE

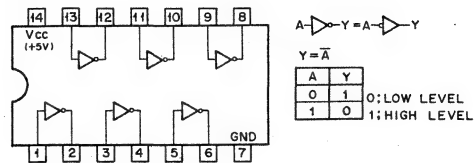
- TOP VIEW -



74F04SJ (FSC) FLAT PACKAGE

TTL INVERTER

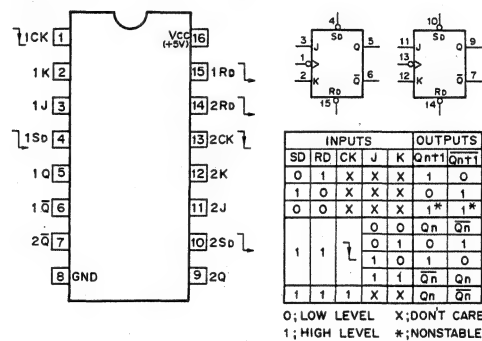
- TOP VIEW -



74F112PC (RCA)

TTL J-K FLIP-FLOP WITH DIRECT SET/RESET

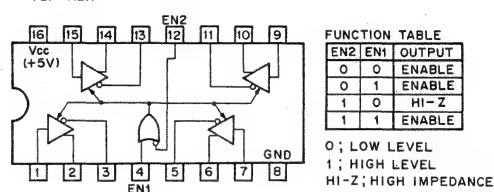
- TOP VIEW -



AM26LS31CNS (TI)

HIGH SPEED DIFFERENTIAL LINE DRIVER

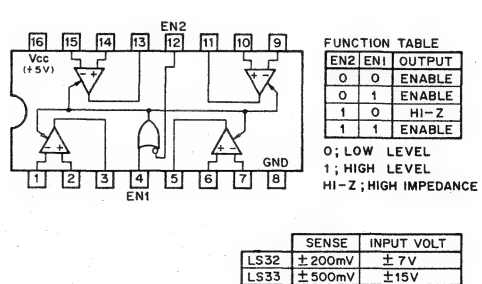
- TOP VIEW -



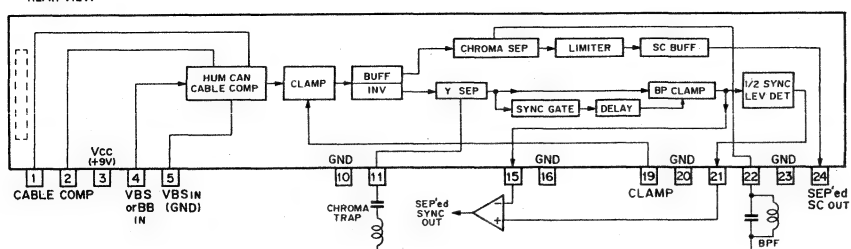
AM26LS32ACNS (TI)

HIGH SPEED DIFFERENTIAL LINE RECEIVER

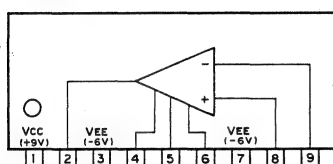
- TOP VIEW -



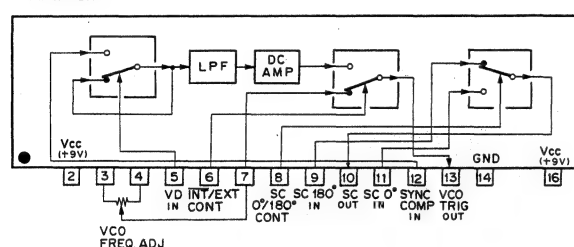
**BX1040 (SONY)**  
SYNC SEPARATOR  
— REAR VIEW —



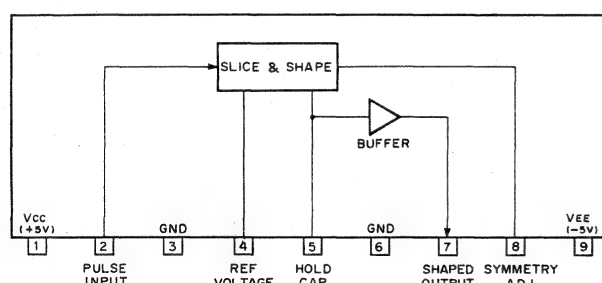
**BX1356 (SONY)**  
VIDEO OUTPUT AMPLIFIER  
— PRINTED SIDE —



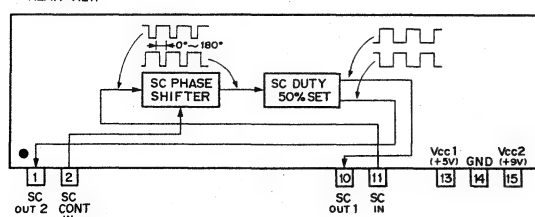
**BX1291 (SONY)**  
APC AMPLIFIER AND SC 0/180° SELECTOR  
— REAR VIEW —



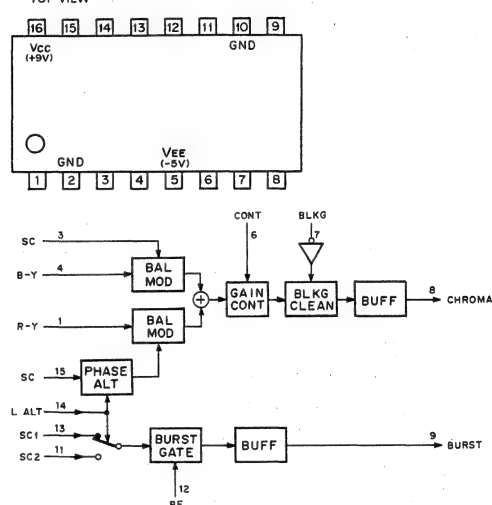
**BX1333L (SONY)**  
PULSE SHAPER  
— PRINTED SIDE VIEW —



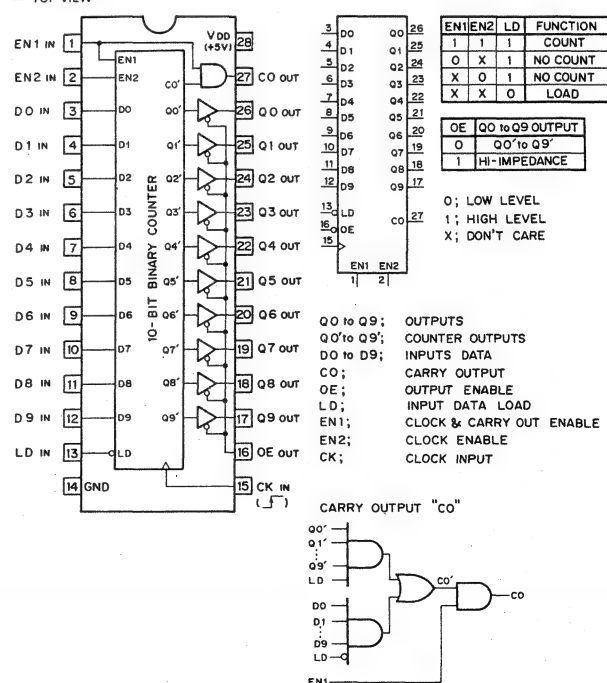
**BX1399A (SONY)**  
SC PHASE SHIFTER  
— REAR VIEW —



**CX22017 (SONY)**  
VIDEO SIGNAL PROCESSOR  
— TOP VIEW —



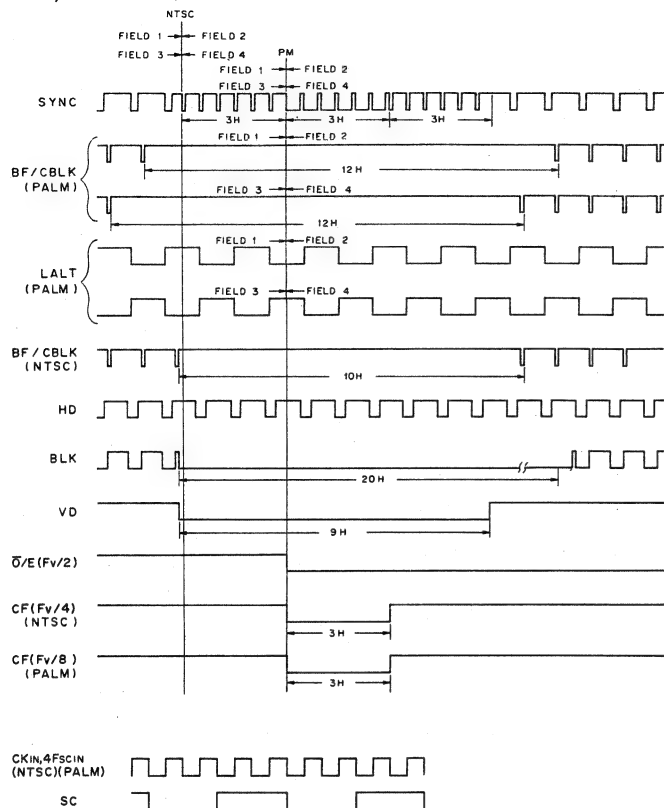
**CX23043 (SONY)**  
N-MOS SYNCHRONOUS 10-BIT BINARY COUNTER  
— TOP VIEW —



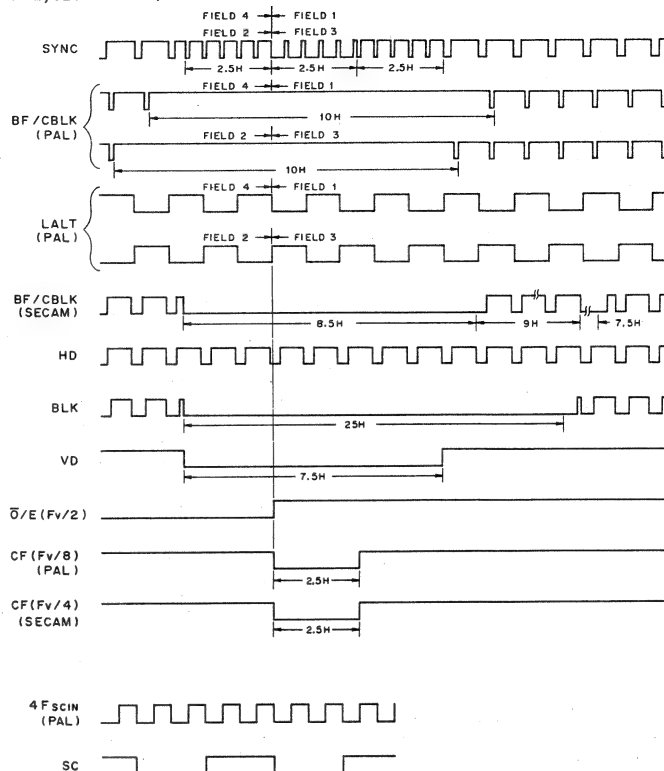
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP



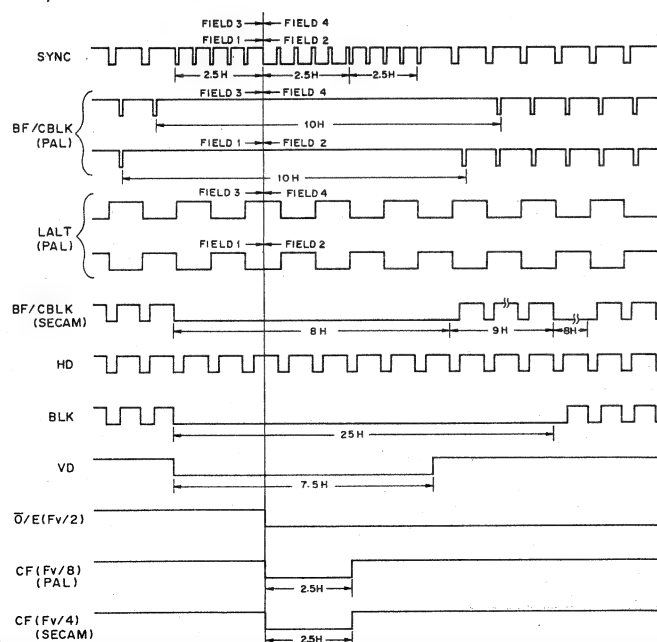
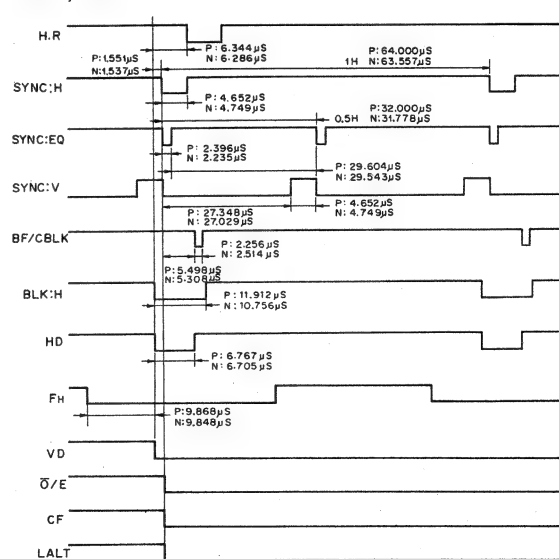
## NTSC, PAL-M (FIELD 2, 4)



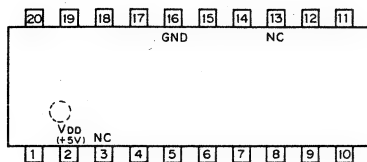
## PAL, SECAM (FIELD 1, 3)



## PAL, SECAM (FIELD 4, 2)

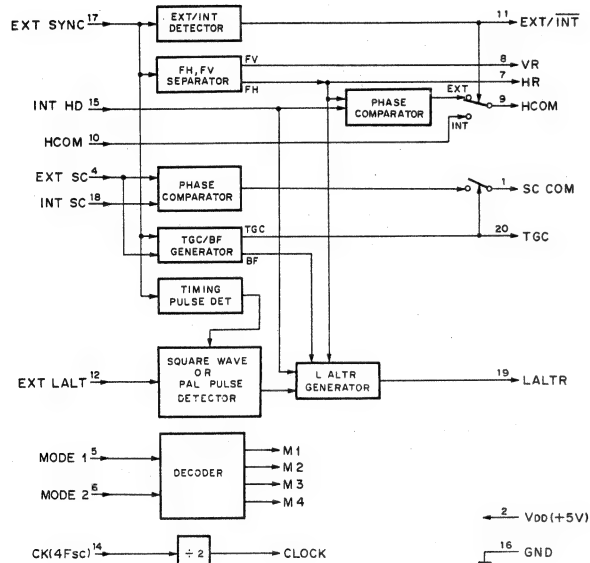
P: PAL, SECAM  
N: NTSC, PALM

CX7998 (SONY) FLAT PACKAGE  
C-MOS GENLOCK DRIVER  
— TOP VIEW —

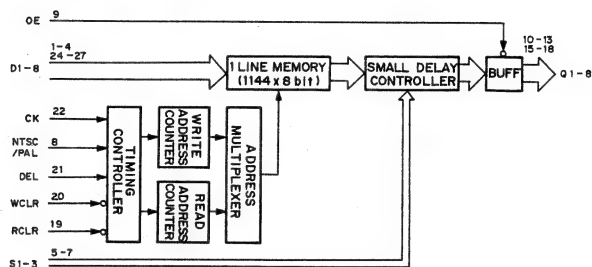
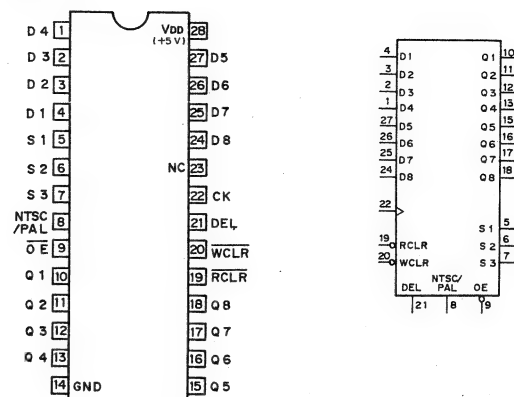


INPUTS		EXT LOCK MODE	
MODE 1	MODE 2	M 1	M 2
0	0	M 1	PAL:VBS
1	0	M 2	PAL-M:VBS
0	1	M 3	PAL:VS/SC/LALT
1	1	M 4	SECAM:VS/SC/LALT
			NTSC:VBS
			NTSC:VS/SC
			PAL-MVS/SC/LALT

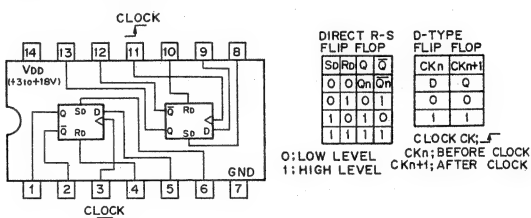
0; LOW LEVEL  
1; HIGH LEVEL



CXK1202S (SONY)  
C-MOS DIGITAL DELAY LINE  
— TOP VIEW —



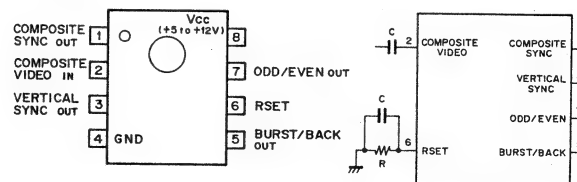
HD140138FP (HITACHI) FLAT PACKAGE  
C-MOS D-TYPE FLIP-FLOP WITH DIRECT SET/RESET  
— TOP VIEW —



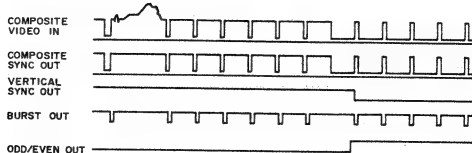
DIRECT R-S FLIP FLOP		D-TYPE FLIP FLOP	
S	R	Q	Qn+1
0	0	Q	Q
0	1	0	0
1	0	1	1
1	1	1	1

0: LOW LEVEL  
1: HIGH LEVEL  
CLOCK CK<sub>n</sub>: BEFORE CLOCK  
CK<sub>n+1</sub>: AFTER CLOCK

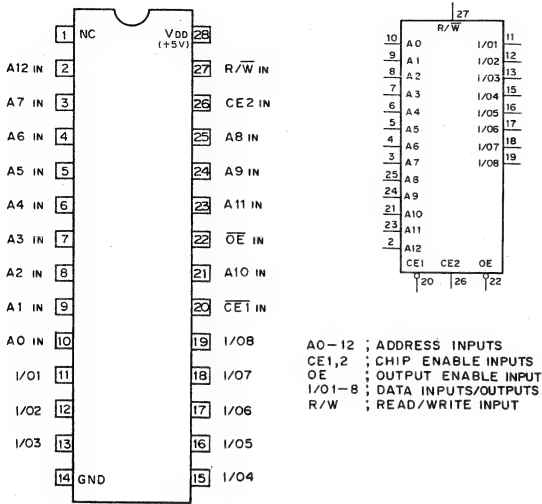
LM1881N (NS)  
VIDEO SYNC SEPARATOR  
— TOP VIEW —



TIMING CHART



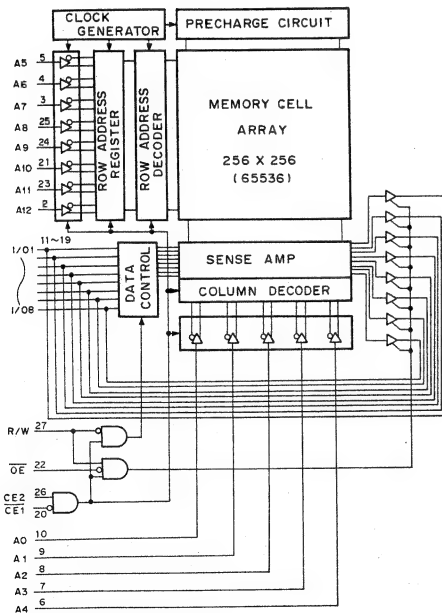
HM626LFP-15SL (HITACHI) (ACCESS TIME=150ns) FLAT PACKAGE  
C-MOS 8192 WORDx8-BIT STATIC RAM  
- TOP VIEW -



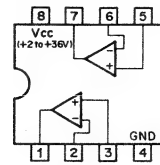
A0-12 : ADDRESS INPUTS  
CE1,2 : CHIP ENABLE INPUTS  
OE : OUTPUT ENABLE INPUT  
I/O1-8 : DATA INPUTS/OUTPUTS  
R/W : READ/WRITE INPUT

MODE	CE1	CE2	OE	R/W	I/O1~8
READ	0	1	0	1	DATA OUTPUTS
WRITE	0	1	X	0	DATA INPUTS
OUTPUT DESELECT	0	1	1	1	HI-Z
STANDBY	1	X	X	X	HI-Z
	X	0	X	X	HI-Z

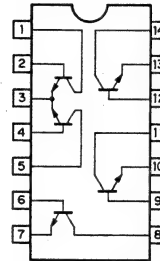
0 : LOW LEVEL  
1 : HIGH LEVEL  
X : DON'T CARE  
HI-Z : HIGH IMPEDANCE



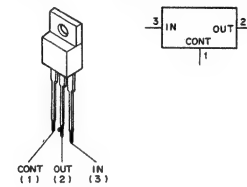
LM2903M (RAYTHEON) FLAT PACKAGE  
VOLTAGE COMPARATOR  
- TOP VIEW -



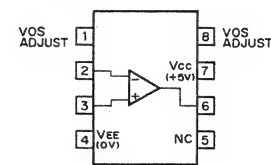
LM3046N (NSC)  
NPN TRANSISTOR ARRAY  
- TOP VIEW -



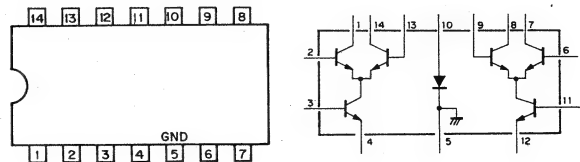
LM317LZ (NSC)  
LM317T (NSC)  
3-TERMINAL ADJUSTABLE REGULATOR



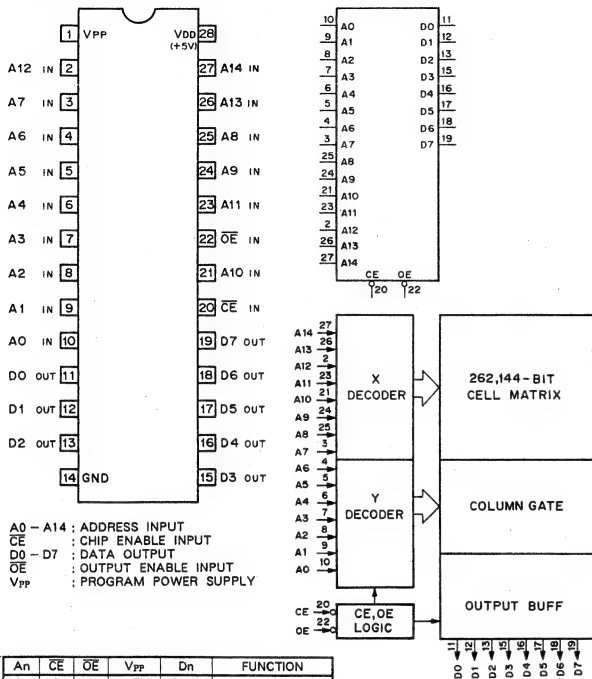
LM6361M (NEC)  
HIGH SPEED OPERATIONAL AMPLIFIER  
- TOP VIEW -



M5109P (MITSUBISHI)  
DIFFERENTIAL AMPLIFIER  
- TOP VIEW -



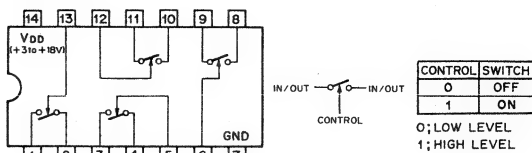
MBM27C256-25 (FUJITSU) (ACCESS TIME=250ns)  
 MBM27C256-25-X (FUJITSU) (ACCESS TIME=250ns)  
 C-MOS 256K (32Kx8)-BIT ERASABLE PROM WITH 3-STATE OUTPUTS  
 - TOP VIEW -



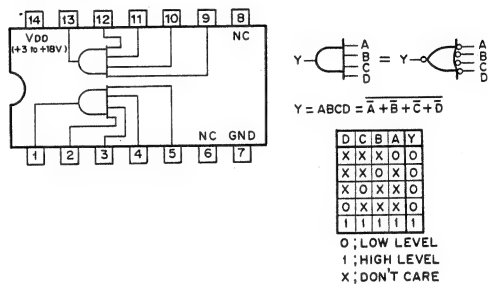
An	CE	OE	VPP	Dn	FUNCTION
An	0	0	+5V	D <sub>OUT</sub>	READ
An	0	1	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	HI-Z	STANDBY
An	0	1	+21V	D <sub>IN</sub>	PGM
An	0	0	+21V	D <sub>OUT</sub>	PGM VERIFY
X	1	1	+21V	HI-Z	PGM INH

0: LOW LEVEL  
 1: HIGH LEVEL  
 X: DON'T CARE  
 HI-Z: HIGH IMPEDANCE

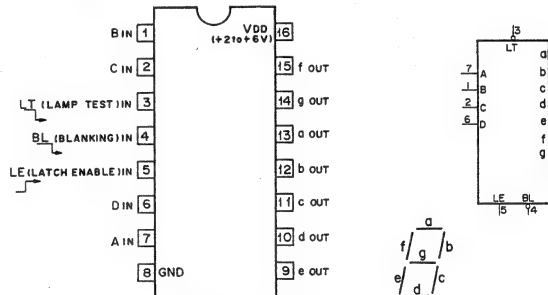
MC14066BF (MOTOROLA) FLAT PACKAGE  
 C-MOS BILATERAL ANALOG SWITCH  
 - TOP VIEW -



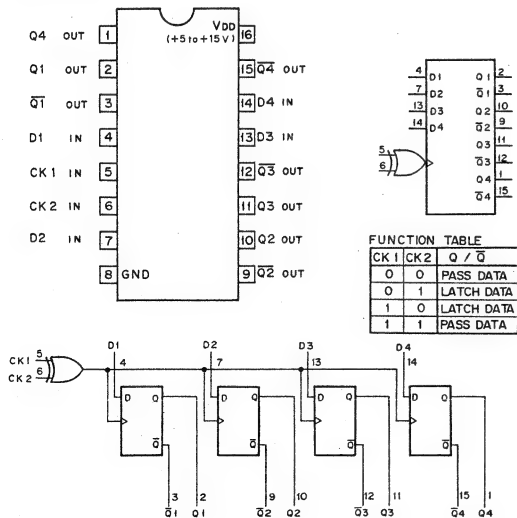
MC14082BF (MOTOROLA) FLAT PACKAGE  
 C-MOS 4-INPUT AND GATE  
 - TOP VIEW -



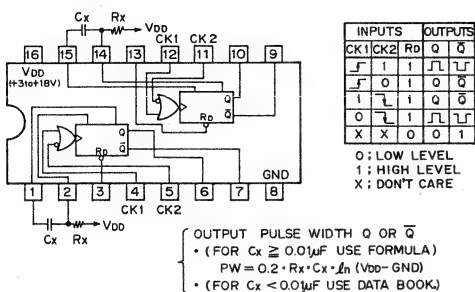
MC14511BF (MOTOROLA) FLAT PACKAGE  
 TC4512BF (TOSHIBA)  
 C-MOS BCD TO 7 SEGMENT LATCH/DECODER/DRIVER  
 - TOP VIEW -



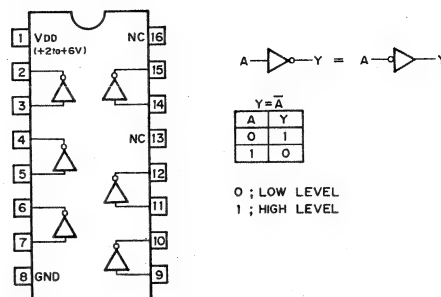
MC14042BF (MOTOROLA) FLAT PACKAGE  
 TC4042BF (TOSHIBA) FLAT PACKAGE  
 C-MOS D-TYPE LATCH  
 - TOP VIEW -



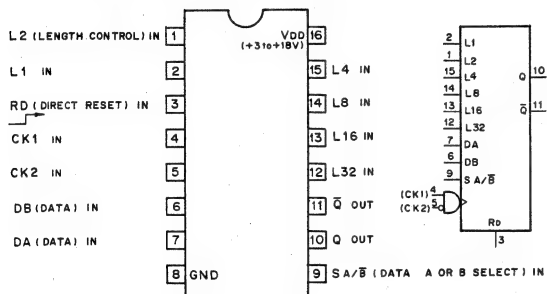
MC14528BF (MOTOROLA) FLAT PACKAGE  
C-MOS RETRIGGERABLE/RESETTABLE MMV  
— TOP VIEW —



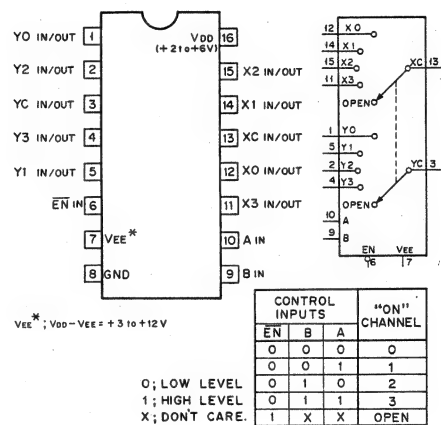
MC74HC4049F (TOSHIBA)  
TC74HC4049F (TOSHIBA) FLAT PACKAGE  
C-MOS HEX BUFFER/CONVERTER (INVERTING)  
— TOP VIEW —



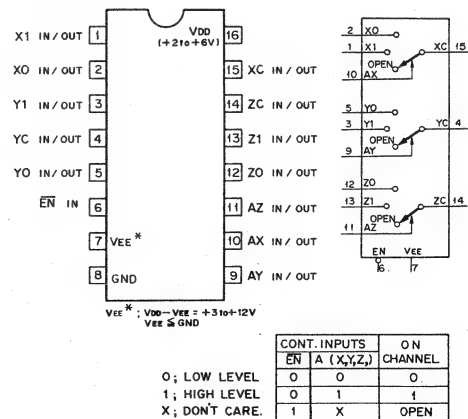
MC14557BCP (MOTOROLA)  
C-MOS 1-TO-64-BIT VARIABLE LENGTH SHIFT REGISTER  
— TOP VIEW —



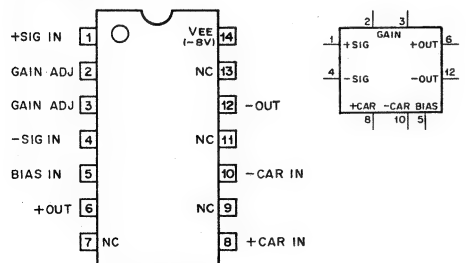
MC74HC4052F (MOTOROLA) FLAT PACKAGE  
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER  
— TOP VIEW —



MC74HC4053F (MOTOROLA) FLAT PACKAGE  
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER  
— TOP VIEW —

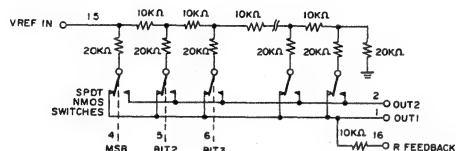
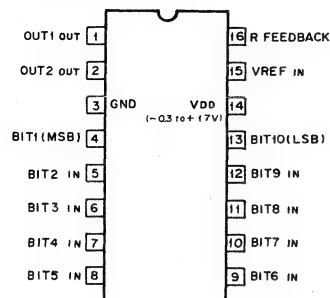


MC1496P (MOTOROLA)  
BALANCED MODULATOR/DEMULATOR  
— TOP VIEW —

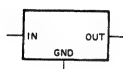
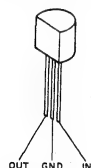




NJU8101M (NEC) FLAT PACKAGE  
C-MOS 10-BIT MULTIPLYING D/A CONVERTER  
- TOP VIEW -

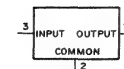
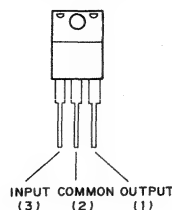


RC78L??A (RAYTHEON)  
POSITIVE VOLTAGE REGULATOR (100mA)



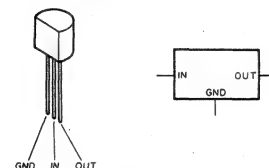
OUTPUT VOLTAGE	NJM78L??A	RC78L??A	UA78L??ACL	UA78L??AWV	uPC78L??J	AN78L??
+2.6V	NJM78L02A	RC78L02A	UA78L02ACL	UA78L26AWV	-----	-----
+4V	NJM78L05A	RC78L05A	UA78L05ACL	UA78L05AWV	uPC78L05J	AN78L04
+5V	NJM78L06A	RC78L06A	UA78L06ACL	UA78L06AWV	-----	AN78L05
+6.2V	-----	-----	UA78L06ACL	UA78L62AWV	-----	AN78L06
+7V	-----	-----	-----	-----	-----	AN78L07
+8V	NJM78L08A	RC78L08A	UA78L08ACL	-----	uPC78L08J	AN78L08
+8.2V	-----	-----	-----	UA78L82AWV	-----	-----
+9V	NJM78L09A	RC78L09A	UA78L09ACL	UA78L09AWV	-----	AN78L09
+10V	-----	-----	UA78L10ACL	-----	uPC78L10J	AN78L10
+12V	NJM78L12A	RC78L12A	UA78L12ACL	UA78L12AWV	uPC78L12J	AN78L12
+15V	NJM78L15A	RC78L15A	UA78L15ACL	UA78L15AWV	uPC78L15J	AN78L15
+18V	NJM78L18A	RC78L18A	-----	UA78L18AWV	-----	AN78L18
+20V	NJM78L20A	RC78L20A	-----	-----	-----	AN78L20
+24V	NJM78L24A	RC78L24A	-----	UA78L24AWV	-----	AN78L24

RC78M??FA (RAYTHEON)  
POSITIVE VOLTAGE REGULATOR  
- FRONT VIEW -



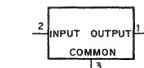
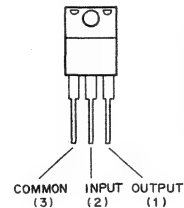
OUTPUT VOLTAGE	NJM78M??FA	NJM78??FA	RC78M??FA	RC78??FA
+5V	NJM78M05FA	NJM7805FA	RC78M05FA	RC7805FA
+6V	NJM78M06FA	NJM7806FA	RC78M06FA	RC7806FA
+8V	NJM78M08FA	NJM7808FA	-----	RC7808FA
+9V	NJM78M09FA	NJM7809FA	RC78M09FA	RC7809FA
+12V	NJM78M12FA	NJM7812FA	RC78M12FA	RC7812FA
+15V	NJM78M15FA	NJM7815FA	RC78M15FA	RC7815FA
+18V	NJM78M18FA	NJM7818FA	-----	RC7818FA
+20V	NJM78M20FA	NJM7820FA	-----	RC7820FA
+24V	NJM78M24FA	NJM7824FA	-----	RC7824FA

RC79L??A (RAYTHEON)  
NEGATIVE VOLTAGE REGULATOR (100mA)  
- FRONT VIEW -



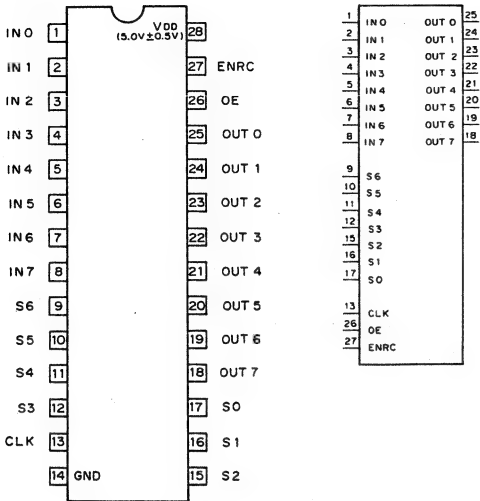
OUTPUT VOLTAGE	NJM79L??A	RC79L??A	AN79L??
-3V	NJM79L03A	RC79L03A	-----
-4V	-----	-----	AN79L04
-5V	NJM79L05A	RC79L05A	AN79L05
-6V	NJM79L06A	RC79L06A	AN79L06
-7V	-----	-----	AN79L07
-8V	NJM79L08A	RC79L08A	AN79L08
-9V	NJM79L09A	RC79L09A	AN79L09
-10V	-----	-----	AN79L10
-12V	NJM79L12A	RC79L12A	AN79L12
-15V	NJM79L15A	RC79L15A	AN79L15
-18V	NJM79L18A	RC79L18A	AN79L18
-20V	-----	-----	AN79L20
-24V	NJM79L24A	RC79L24A	AN79L24

RC79M??FA (JRC)  
NEGATIVE VOLTAGE REGULATOR  
- FRONT VIEW -

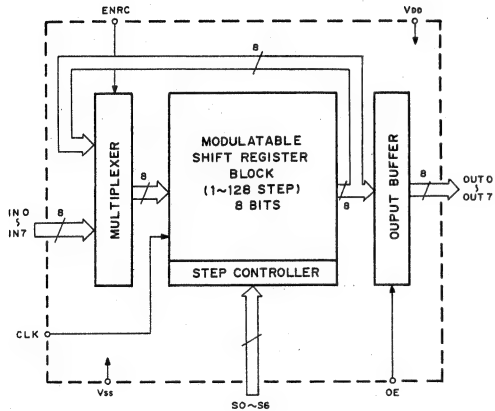
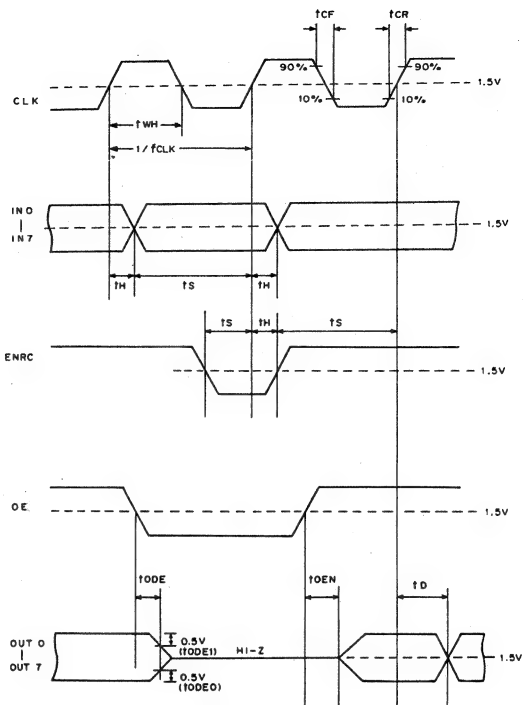


-5V	NJM79M05FA
-6V	NJM79M06FA
-8V	NJM79M08FA
-9V	NJM79M09FA
-12V	NJM79M12FA
-15V	NJM79M15FA
-18V	NJM79M18FA
-24V	NJM79M24FA

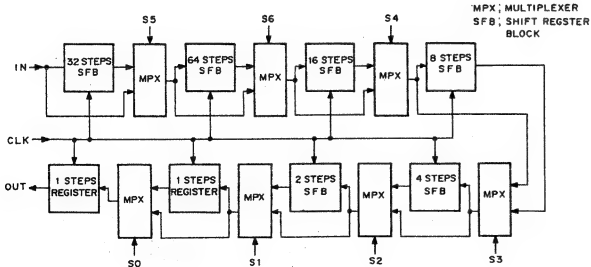
SM5828P (NPC)  
C-MOS 128 STEPS 8 BITS PROGRAMABLE SHIFT REGISTER  
- TOP VIEW -



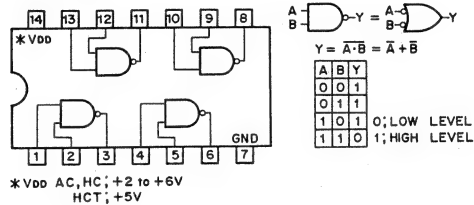
CLK ; CLOCK INPUT  
ENRC ; CIRCULATION CONTROL  
IN0-IN7 ; DATA INPUT  
OE ; OUTPUT ENABLE  
OUT0-OUT7 ; DATA OUTPUT  
S0-S6 ; REGISTER LENGTH SELECT



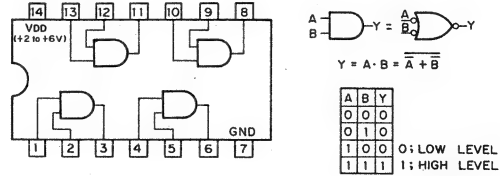
MODULABLE SHIFT REGISTER BLOCK



SN74HC00NS (TI) FLAT PACKAGE  
TC74HC00F (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT NAND GATE  
- TOP VIEW -

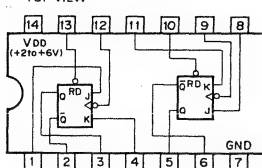


SN74HC08NS (MOTOROLA) FLAT PACKAGE  
TC74HC08F (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT AND GATE  
- TOP VIEW -





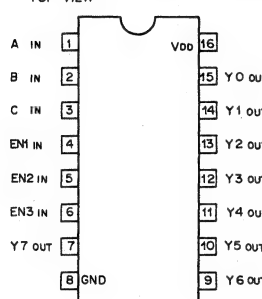
SN74HC107NS (TI) FLAT PACKAGE  
C-MOS DUAL J-K FLIP-FLOPS  
— TOP VIEW —



INPUT				OUTPUT
RD	CK	J	K	Q
0	X	X	X	0
1	L	0	0	NO CHANGE
1	L	1	0	1
1	L	0	1	0
1	L	1	1	TOGGLE

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

SN74HC138NS (TI) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER  
— TOP VIEW —



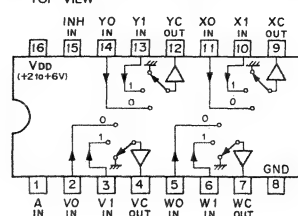
1	A	Y0	15
2	B	Y1	14
3	C	Y2	13
		Y3	12
		Y4	11
EN1		Y5	10
EN2	EN	Y6	9
EN3		Y7	8

INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = EN1 · EN2 · EN3  
0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

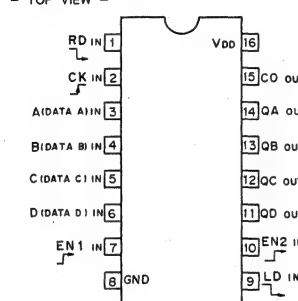
SN74HC157N (TI)  
C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER  
— TOP VIEW —



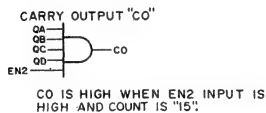
CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	GND

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

SN74HC163NS (TI) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER  
— TOP VIEW —

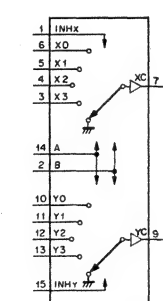
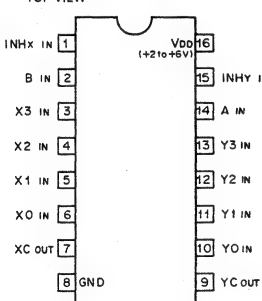


MODE SELECTION					MODE
RD	LD	EN1	EN2		
0	X	X	X		RESET (SYNCHRONOUS)
1	0	X	X		PRESET (SYNCHRONOUS)
1	1	0	X		NO COUNT
1	1	X	0		NO COUNT
1	1	1	1		COUNT



COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

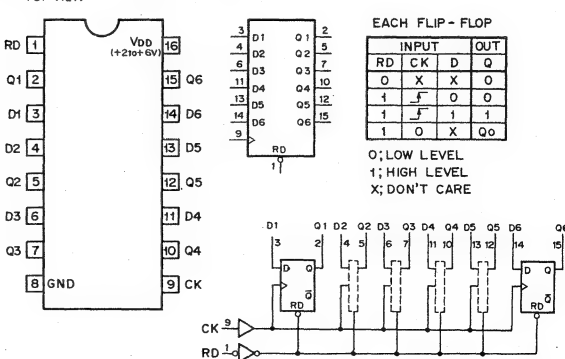
SN74HC153NS (TI) FLAT PACKAGE  
C-MOS 4-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER  
— TOP VIEW —



CONTROL IN			ON CHANNEL
INH	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	GND

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

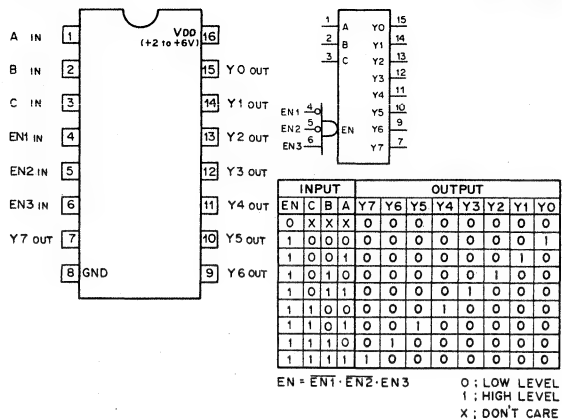
SN74HC174NS (TI) FLAT PACKAGE  
C-MOS D-TYPE FLIP-FLOP WITH RESET  
— TOP VIEW —



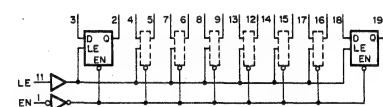
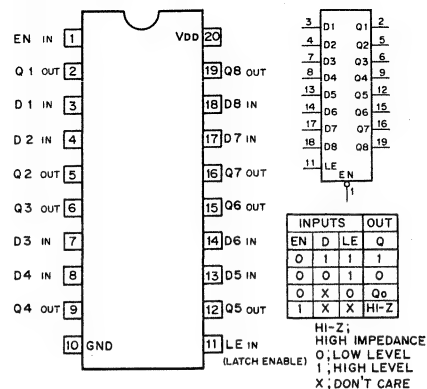
EACH FLIP-FLOP			
INPUT		OUT	
RD	CK	D	Q
0	X	X	0
1	L	0	0
1	L	1	1
1	0	X	Q0

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

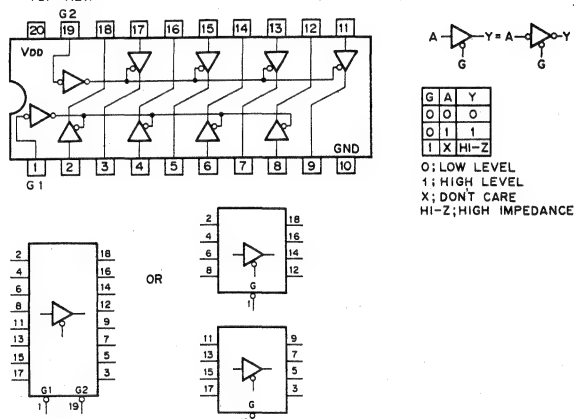
SN74HC238NS (TI) FLAT PACKAGE  
C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER  
— TOP VIEW —



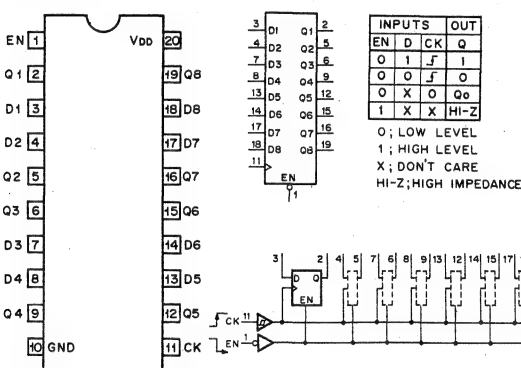
SN74HC373NS (TI) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
TC74HC373F (TOSHIBA) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS 3-STATE OUTPUTS OCTAL LATCHES  
— TOP VIEW —



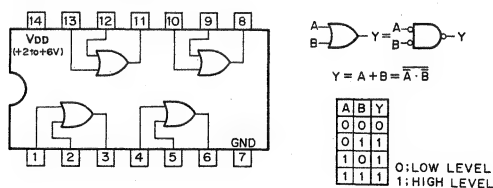
SN74HC244NS (TI) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS BUS BUFFER WITH 3-STATE OUTPUTS  
— TOP VIEW —



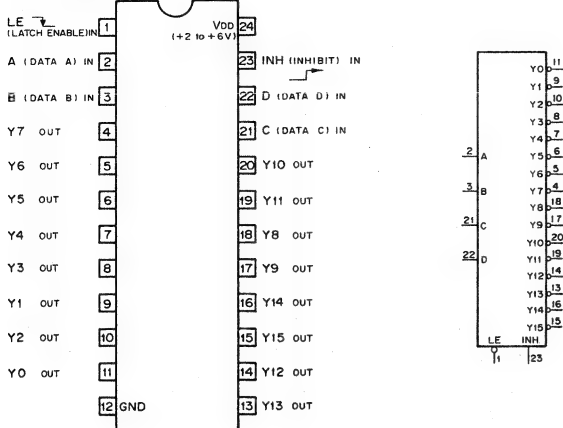
SN74HC374NS (TI) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS 3-STATE OCTAL D-TYPE FLIP-FLOP  
— TOP VIEW —



SN74HC32NS (TI) FLAT PACKAGE  
C-MOS 2-INPUT OR GATE  
— TOP VIEW —

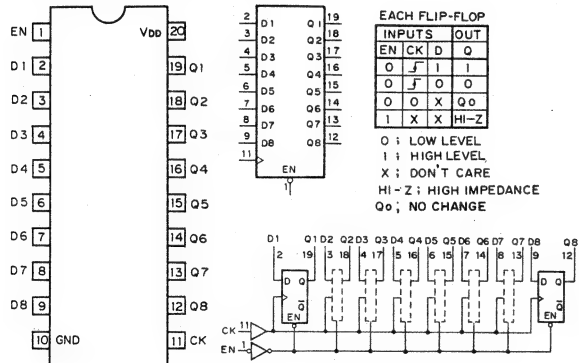


## SN74HC4515NT (TI) FLAT PACKAGE

C-MOS 4-LINE TO 16-LINE DECODER/DEMULTIPLEXER WITH ADDRESS LATCHES  
— TOP VIEW —

INH	LATCHED DATA				SELECTED OUTPUTS															
	D	C	B	A	Y15	Y14	Y13	Y12	Y11	Y10	Y9	Y8	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1

0; LOW LEVEL  
1; HIGH LEVEL  
X; DON'T CARE

SN74HC574NS (TI) (V<sub>DD</sub> = +2 to +6V) FLAT PACKAGE  
TC74HC574F (TOSHIBA) (V<sub>DD</sub> = +2 to +6V) FLAT PACKAGEC-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP  
— TOP VIEW —

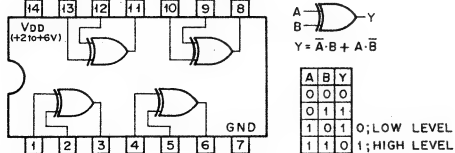
EACH FLIP-FLOP	
INPUTS	OUT
EN CK D	Q
0 0 1	1
0 0 0	0
0 1 X	Q0
1 X X	HI-Z

0; LOW LEVEL  
1; HIGH LEVEL  
X; DON'T CARE  
HI-Z: HIGH IMPEDANCE  
Q0; NO CHANGE

SN74HC86NS (TI) FLAT PACKAGE  
TC74HC86F (TOSHIBA) FLAT PACKAGE

C-MOS EXCLUSIVE OR GATE

— TOP VIEW —



$$Y = A \oplus B = A \oplus B$$

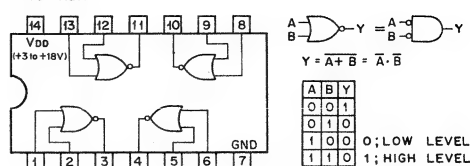
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL  
1; HIGH LEVEL

## TC4001BF (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NOR GATE

— TOP VIEW —



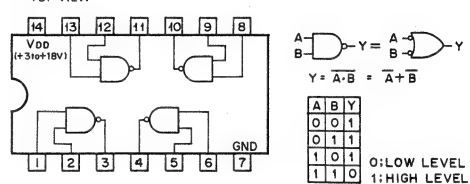
$$Y = A + B = \overline{A \cdot B}$$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0; LOW LEVEL  
1; HIGH LEVEL

TC4011BF (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT NAND GATE

— TOP VIEW —



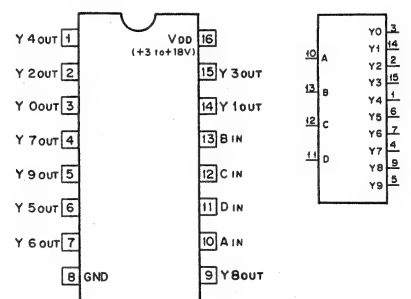
$$Y = A \cdot B = \overline{A + B}$$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL  
1; HIGH LEVEL

TC4028BF (TOSHIBA) FLAT PACKAGE  
C-MOS BCD TO DECIMAL DECODER

— TOP VIEW —

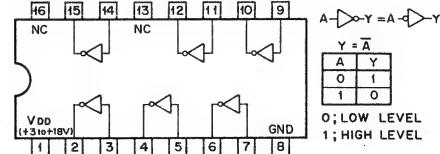


STATE	INPUTS				OUTPUTS									
	D	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	1	0	0	0	0	0	0	0	0
2	0	0	1	0	0	0	1	0	0	0	0	0	0	0
3	0	0	1	1	0	0	0	1	0	0	0	0	0	0
4	0	1	0	0	0	0	0	0	1	0	0	0	0	0
5	0	1	0	1	0	0	0	0	0	1	0	0	0	0
6	0	1	1	0	0	0	0	0	0	0	1	0	0	0
7	0	1	1	1	0	0	0	0	0	0	0	1	0	0
8	1	X	X	0	0	0	0	0	0	0	0	0	1	0
9	1	X	X	1	0	0	0	0	0	0	0	0	0	1

0; LOW LEVEL  
1; HIGH LEVEL  
X; DON'T CARE

TC4049BF (TOSHIBA) FLAT PACKAGE  
C-MOS INVERTING TYPE BUFFER/CONVERTER

— TOP VIEW —

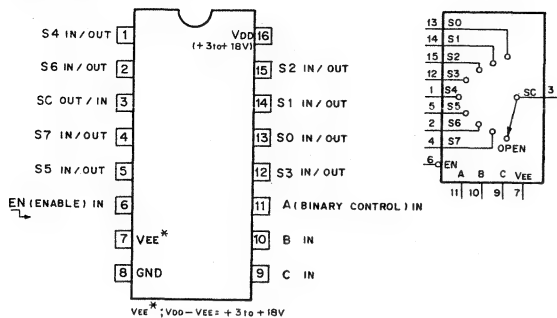


$$Y = \overline{A}$$

A	Y
0	1
1	0

0; LOW LEVEL  
1; HIGH LEVEL

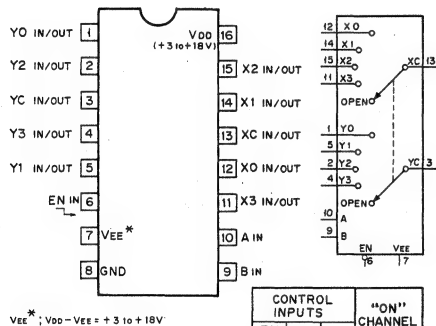
TC4051BFHB (TOSHIBA) FLAT PACKAGE  
C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER  
— TOP VIEW —



EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE

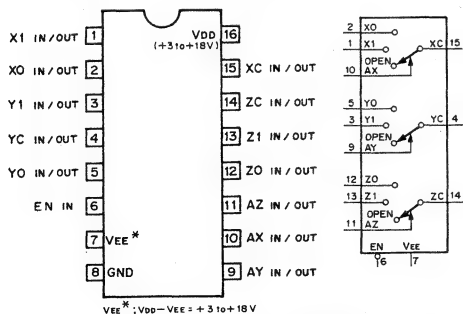
TC4052BFHB (TOSHIBA) FLAT PACKAGE  
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER  
— TOP VIEW —



0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE.

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

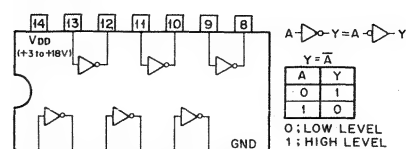
TC4053BFHB (TOSHIBA) FLAT PACKAGE  
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER  
— TOP VIEW —



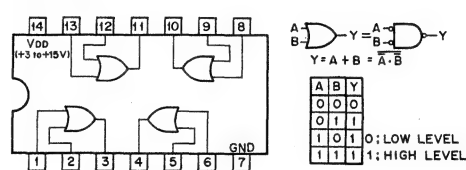
0: LOW LEVEL  
1: HIGH LEVEL  
X: DON'T CARE.

CONT. INPUTS		ON CHANNEL
EN	A (X,Y,Z)	
0	0	0
0	1	1
1	X	OPEN

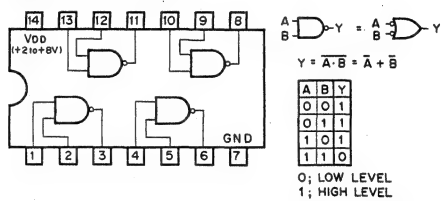
TC4069UBF (TOSHIBA) FLAT PACKAGE  
C-MOS INVERTER  
— TOP VIEW —



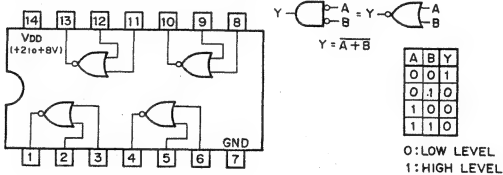
TC4071BF (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT OR GATE  
— TOP VIEW —



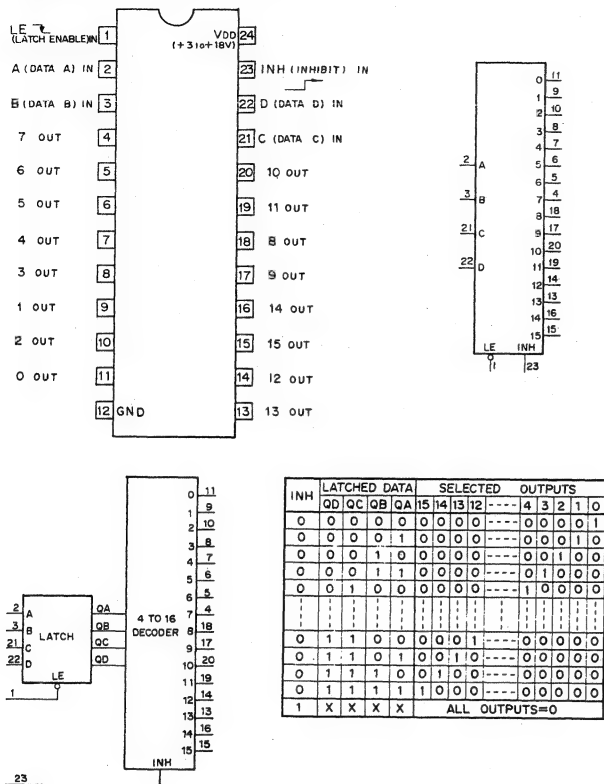
TC40H00F (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT NAND GATE  
— TOP VIEW —



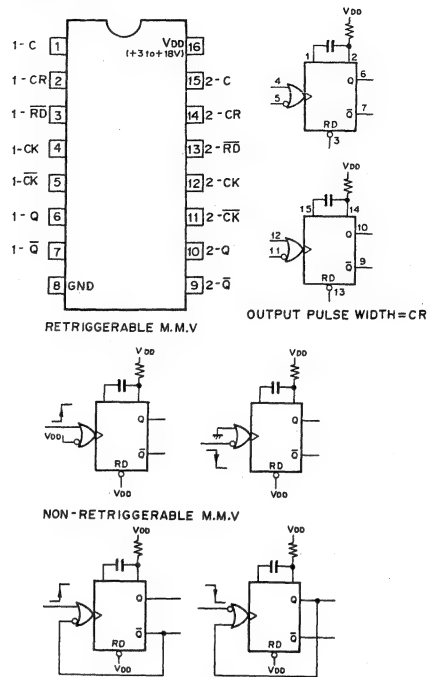
TC40H002F (TOSHIBA) FLAT PACKAGE  
C-MOS 2-INPUT NOR GATE  
— TOP VIEW —



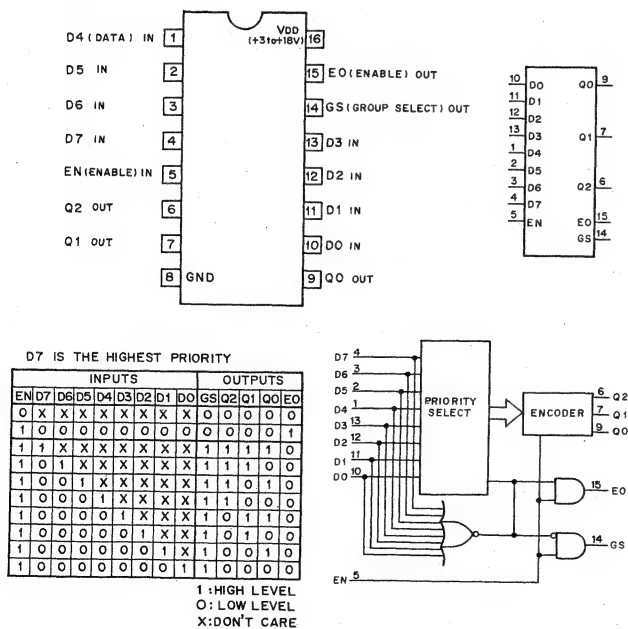
TC4514BP (TOSHIBA)  
C-MOS 4-BIT LATCH/4-TO-16 LINE DECODER  
- TOP VIEW -



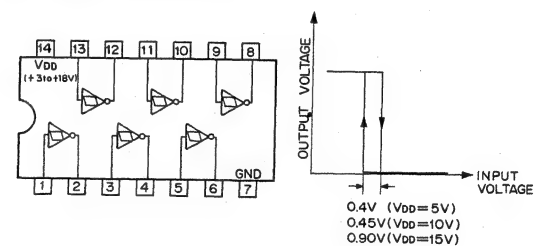
TC4538BF (TOSHIBA) FLAT PACKAGE  
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE  
MONOSTABLE MULTIVIBRATOR  
- TOP VIEW -



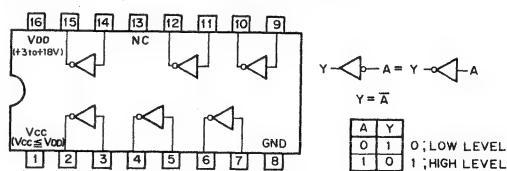
TC4532BP (TOSHIBA)  
C-MOS 8-BIT PRIORITY ENCODER  
- TOP VIEW -



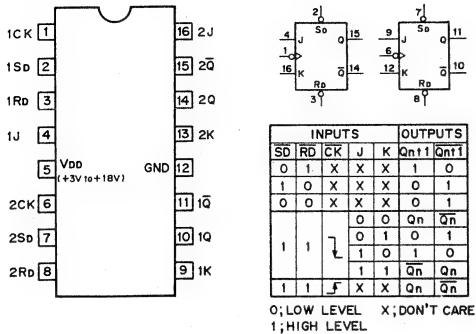
TC4584BF (TOSHIBA) FLAT PACKAGE  
C-MOS SCHMITT TRIGGER INVERTER  
- TOP VIEW -



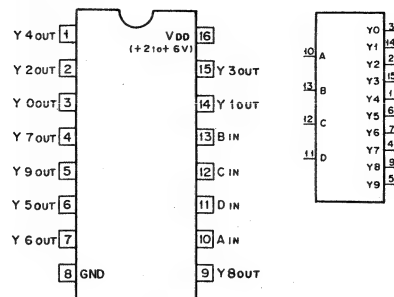
TC5020BP (TOSHIBA)  
C-MOS LOW-TO-HIGH VOLTAGE TRANSLATION INVERTER  
- TOP VIEW -



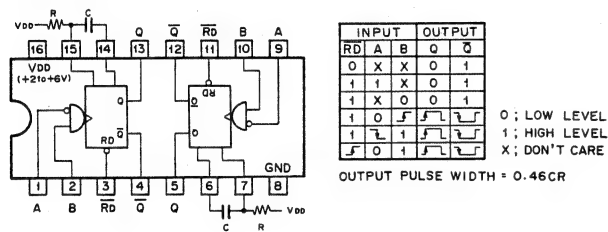
TC7476BP (TOSHIBA)  
C-MOS J-K FLIP-FLOP  
— TOP VIEW —



TC74HC4028F (TOSHIBA) FLAT PACKAGE  
C-MOS BCD TO DECIMAL DECODER  
— TOP VIEW —



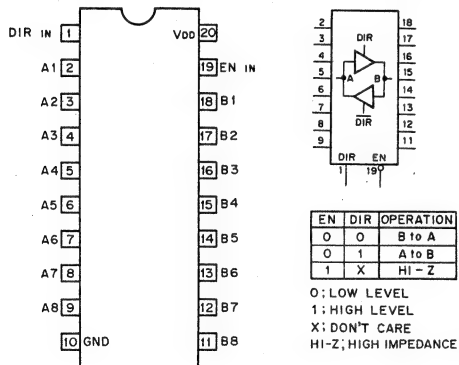
TC74HC123F (TOSHIBA) FLAT PACKAGE  
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR  
— TOP VIEW —



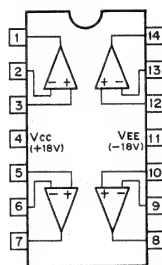
STATE	INPUTS				OUTPUTS									
	D	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	1	0	0	0	0	0	0	0	0
2	0	0	1	0	0	0	1	0	0	0	0	0	0	0
3	0	0	1	1	0	0	0	1	0	0	0	0	0	0
4	0	1	0	0	0	0	0	0	1	0	0	0	0	0
5	0	1	0	1	0	0	0	0	0	1	0	0	0	0
6	0	1	1	0	0	0	0	0	0	0	1	0	0	0
7	0	1	1	1	0	0	0	0	0	0	0	1	0	0
8	1	X	X	0	0	0	0	0	0	0	0	0	1	0
9	1	X	X	1	0	0	0	0	0	0	0	0	0	1

0; LOW LEVEL  
1; HIGH LEVEL  
X; DON'T CARE

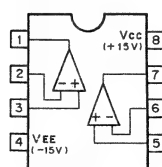
TC74HC245AF (TOSHIBA) ( $V_{DD} = +2$  to  $+6V$ ) FLAT PACKAGE  
C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS  
— TOP VIEW —



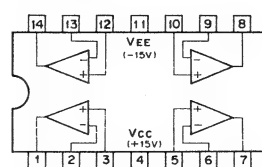
TL064CNS (TI) FLAT PACKAGE  
OPERATIONAL AMPLIFIER  
(J FET-INPUT)  
— TOP VIEW —



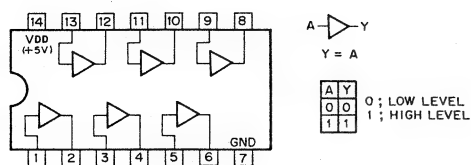
TL082CPS (TI) FLAT PACKAGE  
OPERATIONAL AMPLIFIER  
(J FET-INPUT)  
— TOP VIEW —



TL084CNS (TI) FLAT PACKAGE  
OPERATIONAL AMPLIFIER  
(J FET-INPUT)  
— TOP VIEW —

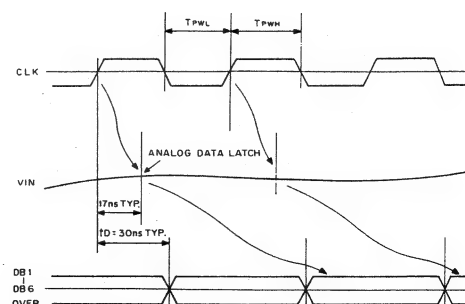
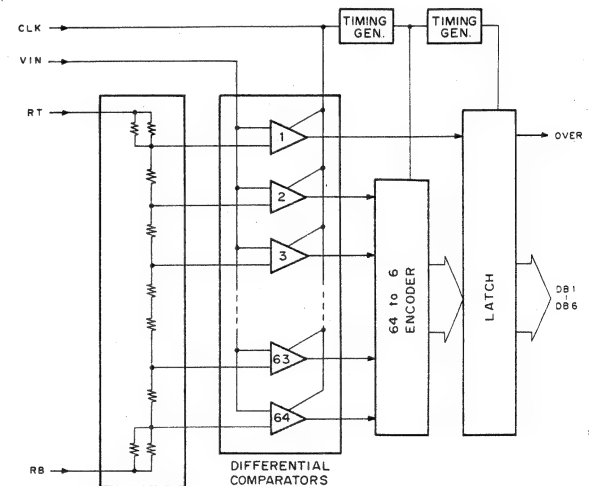
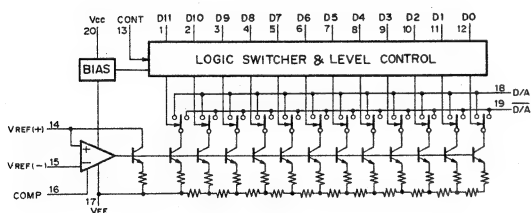


TC74HCT7007AF (TOSHIBA)  
C-MOS HEX BUFFER  
— TOP VIEW —

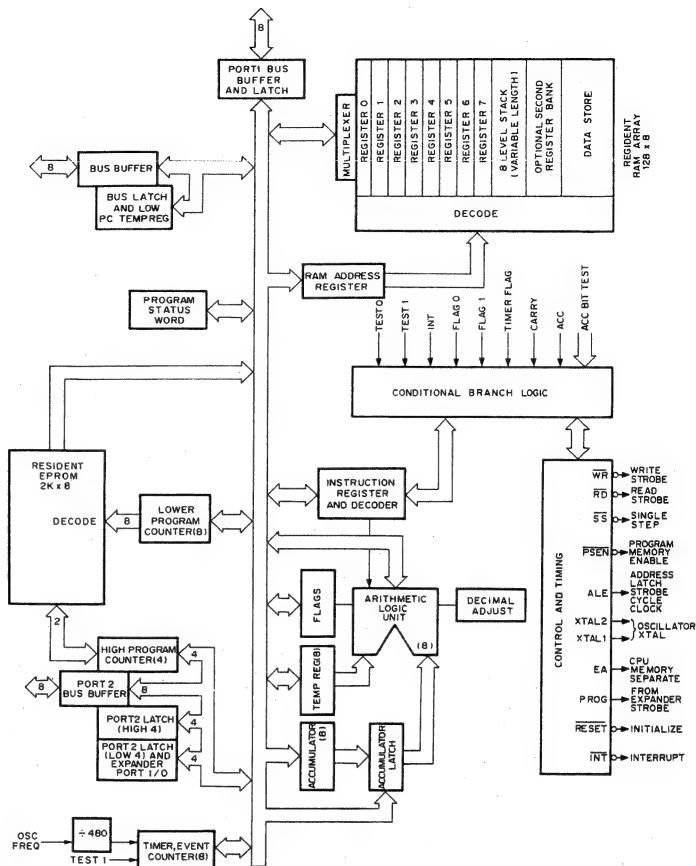
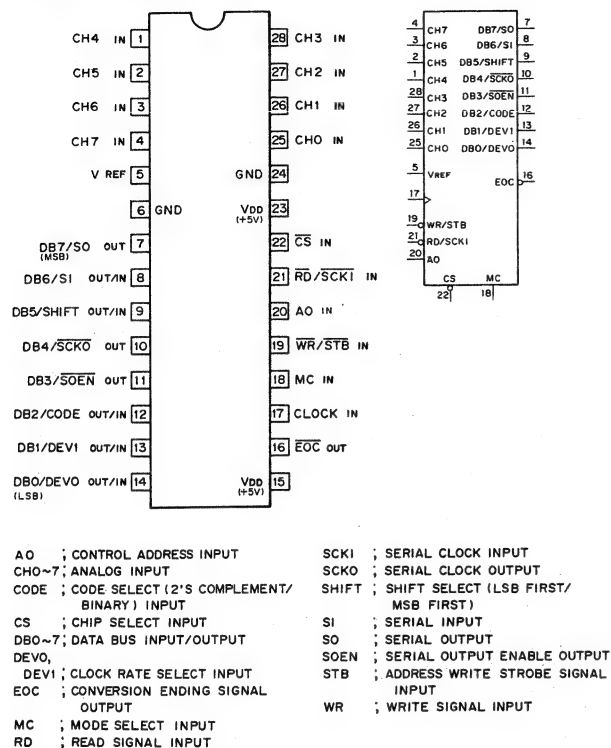


A 4x4 grid with cells numbered 1 through 8. The top row contains cells 8, 7, 6, and 5 from left to right. The bottom row contains cells 1, 2, 3, and 4 from left to right. A path is shown starting from a circle labeled 'O' in the bottom-left corner (row 3, column 1), moving right to cell 2, then up to cell 7, and finally right to cell 8.

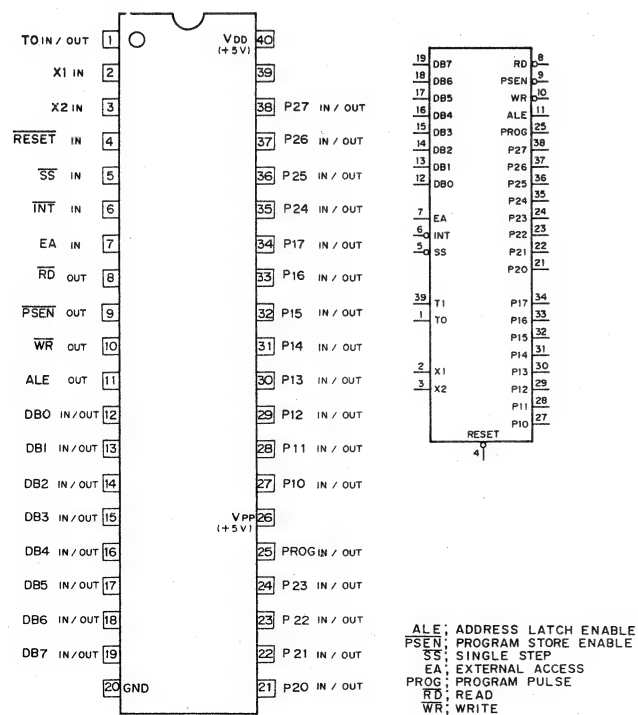
Pin	Function	Pin	Function	Pin	Function
1	DB3	15	D GND	13	VIN
2	DB2	14	R8	12	NC
3	DB1 (MSB)	13	VIN	11	A GND
4	OVER	12	NC	10	AVDD (+5V)
5	D VDD (+5V)	11	A GND	9	D VDD (+5V)
6	RT	10	AVDD (+5V)	8	CLK
7	D GND	9	D VDD (+5V)	7	D GND
8	CLK	8	CLK	6	RT
9	D VDD (+5V)	9	D VDD (+5V)	5	D VDD (+5V)
10	AVDD (+5V)	10	AVDD (+5V)	4	OVER
11	A GND	11	A GND	3	DB1 (MSB)
12	NC	12	NC	2	DB2
13	VIN	13	VIN	1	DB3
14	R8	14	R8		
15	D GND	15	D GND		
16	DB6 (LSB)	16	DB6 (LSB)		



uPD7004C (NEC)  
C-MOS 10-BIT SUCCESSIVE COMPARATOR TYPE A/D CONVERTER  
— TOP VIEW —

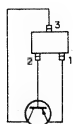


uPD8749HC (NEC)  
uPD8749HD (NEC)  
N-MOS 8-BIT MICROPROCESSOR  
— TOP VIEW —

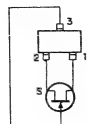




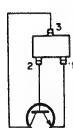
## TRANSISTOR



2SA1162G  
2SA1462  
2SA812



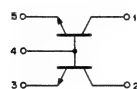
2SK508  
2SK94  
2SK94-X3



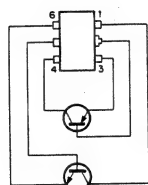
2SC1623  
2SC2757  
UN2224



FMW2-T-98



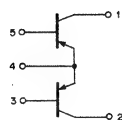
2SD774



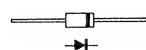
IMZ1T108



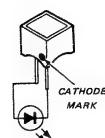
FMS2-T-98



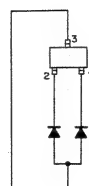
## DIODE



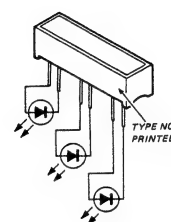
1S1555S



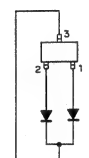
LD-101MG ; GREEN



1S2835-T1



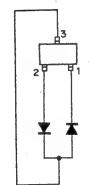
LD-701MG ; GREEN



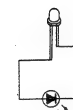
1S2837



RD ? ?M



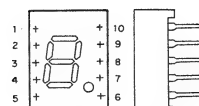
1SS123  
1SS226



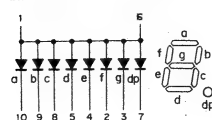
TLY123 ; YELLOW



1SZ ??  
RD ? ?ESB ?



GL-8D03D ; RED



## SECTION 7 SCHEMATIC DIAGRAMS

### CIRCUIT FUNCTION OF THE SCHEMATIC DIAGRAMS

The circuit information is provided below.

	CIRCUIT BOARD	CIRCUIT FUNCTION	PAGE
PROCESS	CN-330	CONNECTOR BOARD	7-151
	CN-332	CONNECTOR BOARD	7-143
	CN-333/333P	SYNC SEPARATOR	7-139
	CN-336	CONNECTOR BOARD	7-147
	EF-20/20P	Y (COMPOSITE) SIGNAL PROCESSOR	7-105
	EF-20C/20CP	B-Y (R-Y) SIGNAL PROCESSOR	7-119
	EN-80/80P	ENCODER	7-135
	HN-105	MOTHER BOARD	7-157
	HN-138	MOTHER BOARD	7-170
	IV-25/25P	MODE SET FOR INPUT VIDEO SIGNAL	7-131
	LE-55	LED	7-179
	SD-19/19P	SIGNAL GENERATOR FOR SIGNAL PROCESSOR	7-47
	SD-20/20P	SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR	7-75
	SOPS-1007	SW REG	7-175
	SY-138/138P	SYSTEM CONTROL	7-29
	SY-154	12BIT DA CHANGER	7-41
	WP-27/27P	WIPE SIGNAL GENERATOR	7-4
CONSOLE	LP-47	LED	7-206
	LP-48	LED	7-206
	LP-49	LED	7-206
	KY-155	SWITCH BOARD	7-185
	KY-157	SUB SWITCH BOARD	7-199
	KY-158	SUB SWITCH BOARD	7-203
	EX-201	EXTENTION BOARD	
	EX-236	EXTENTION BOARD	

WP-27/27P (1/4) WIPE SIGNAL GENERATOR

1

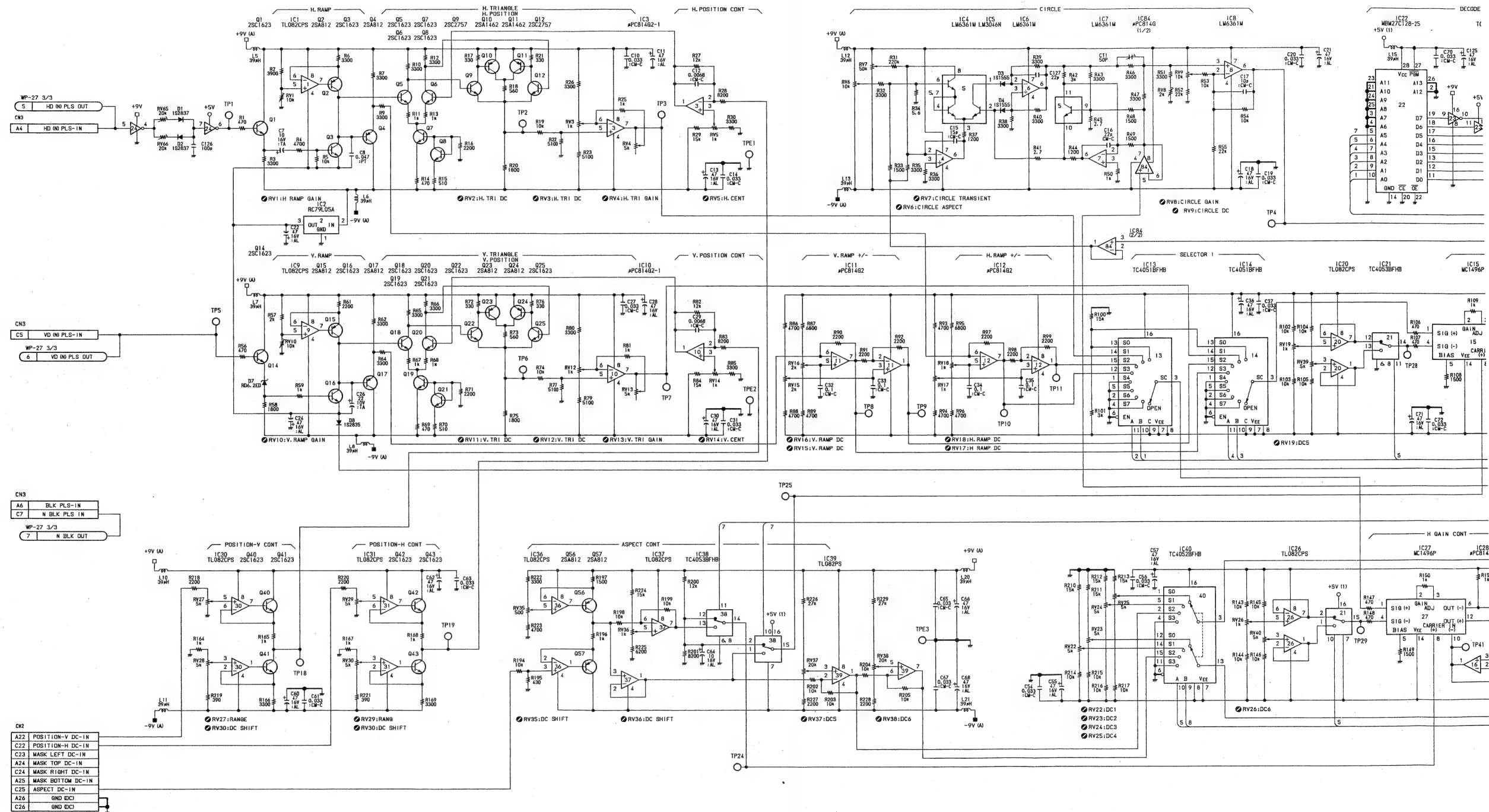
2

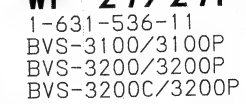
3

4

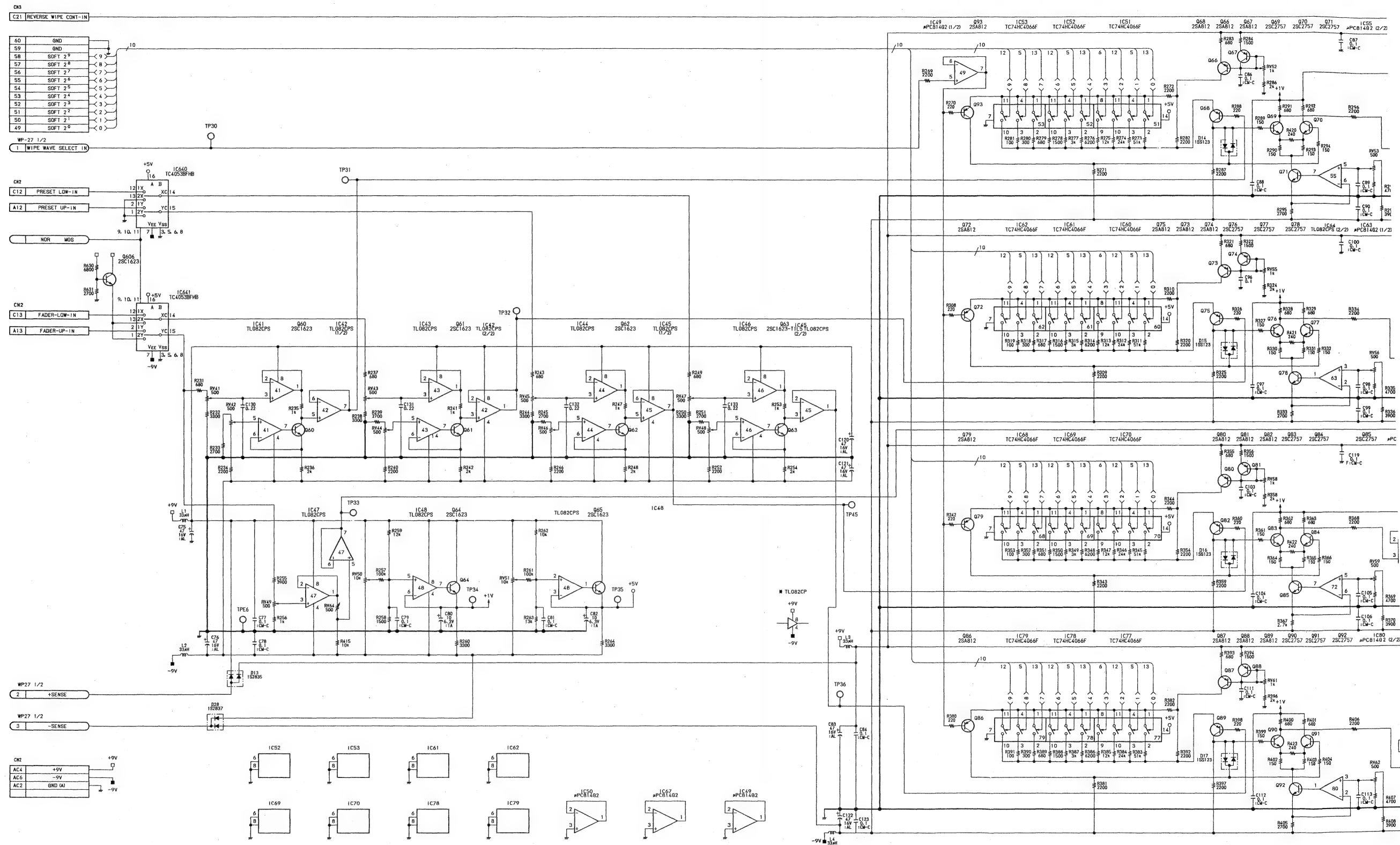
5

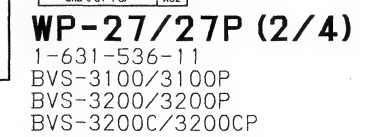
6





## WP-27/27P (2/4) WIPE SIGNAL GENERATOR

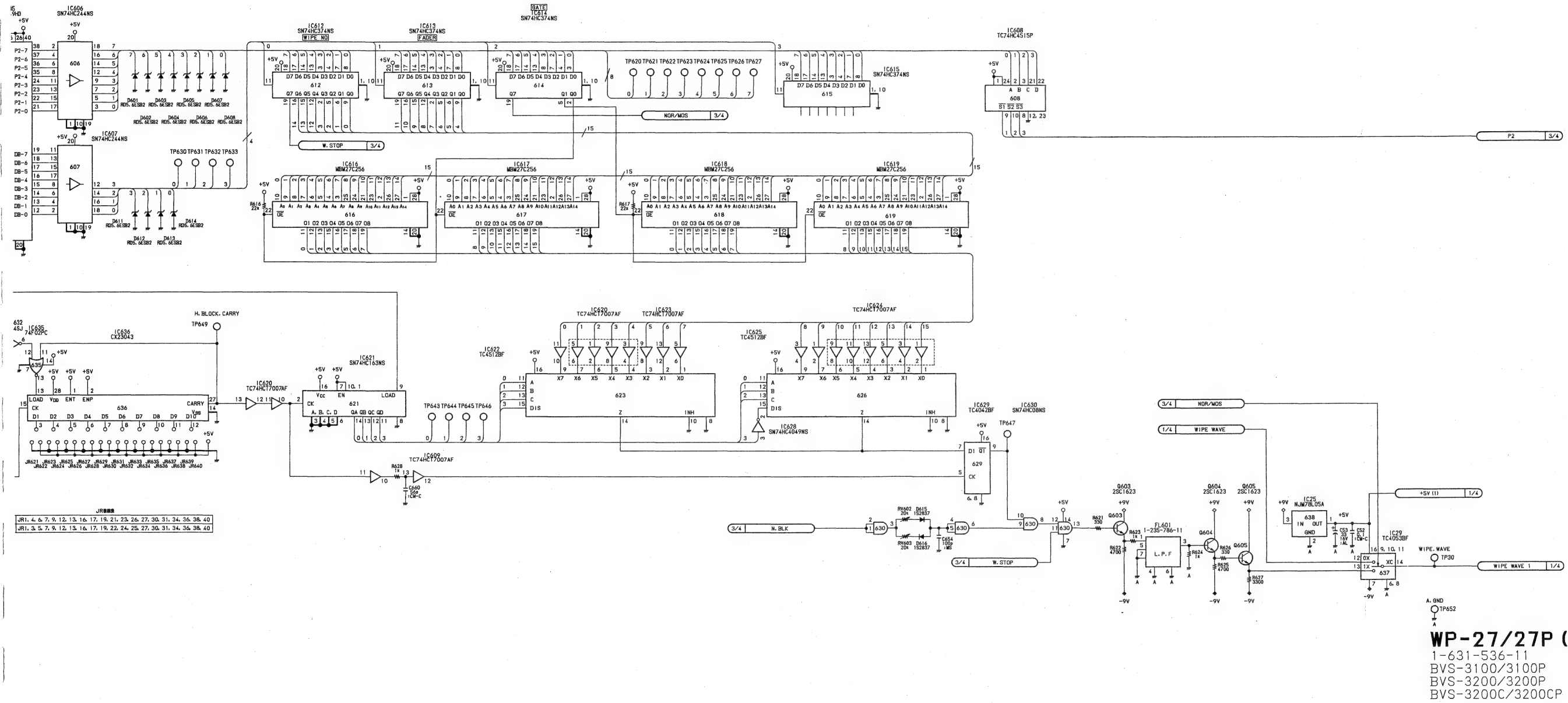




## 6



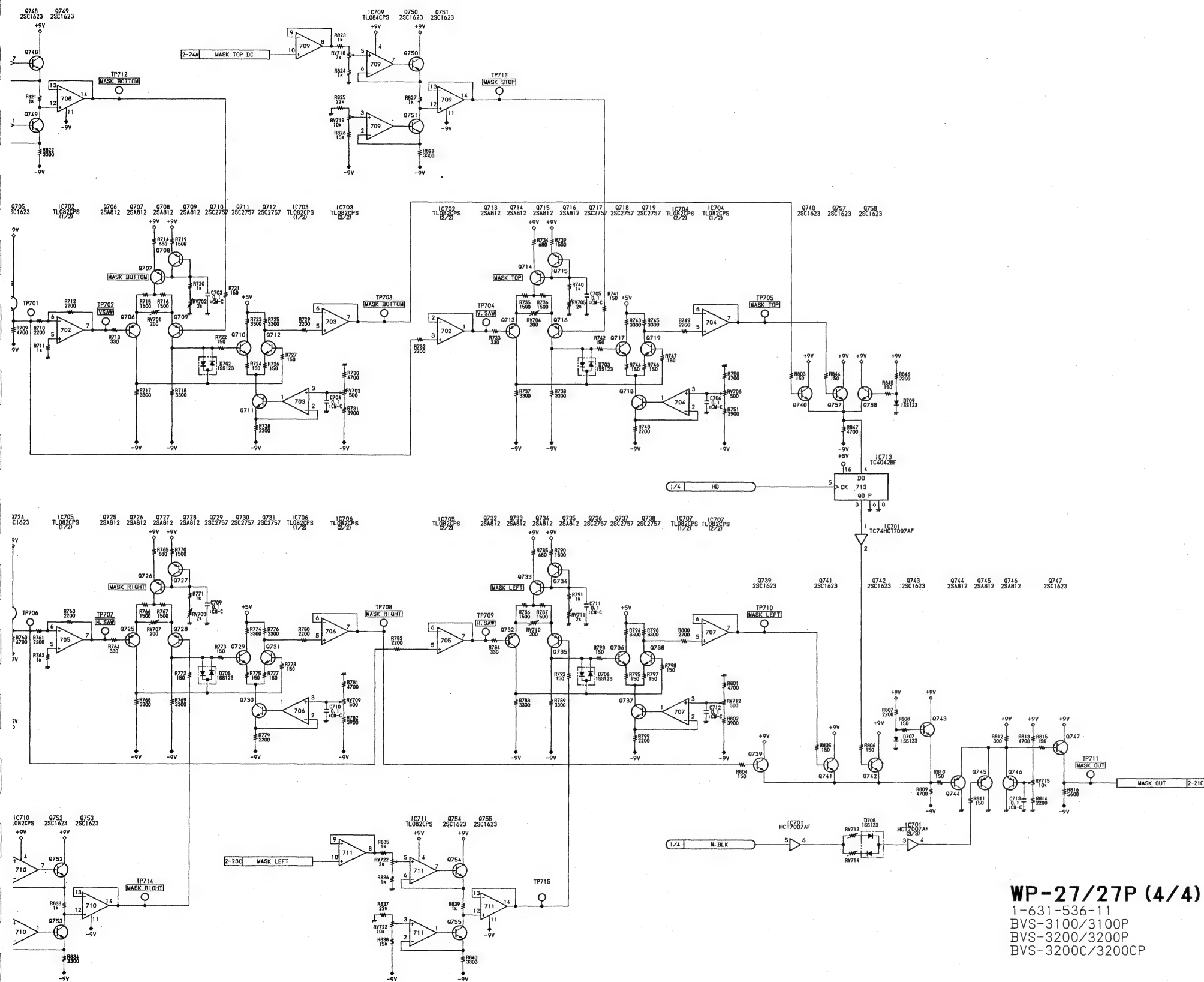




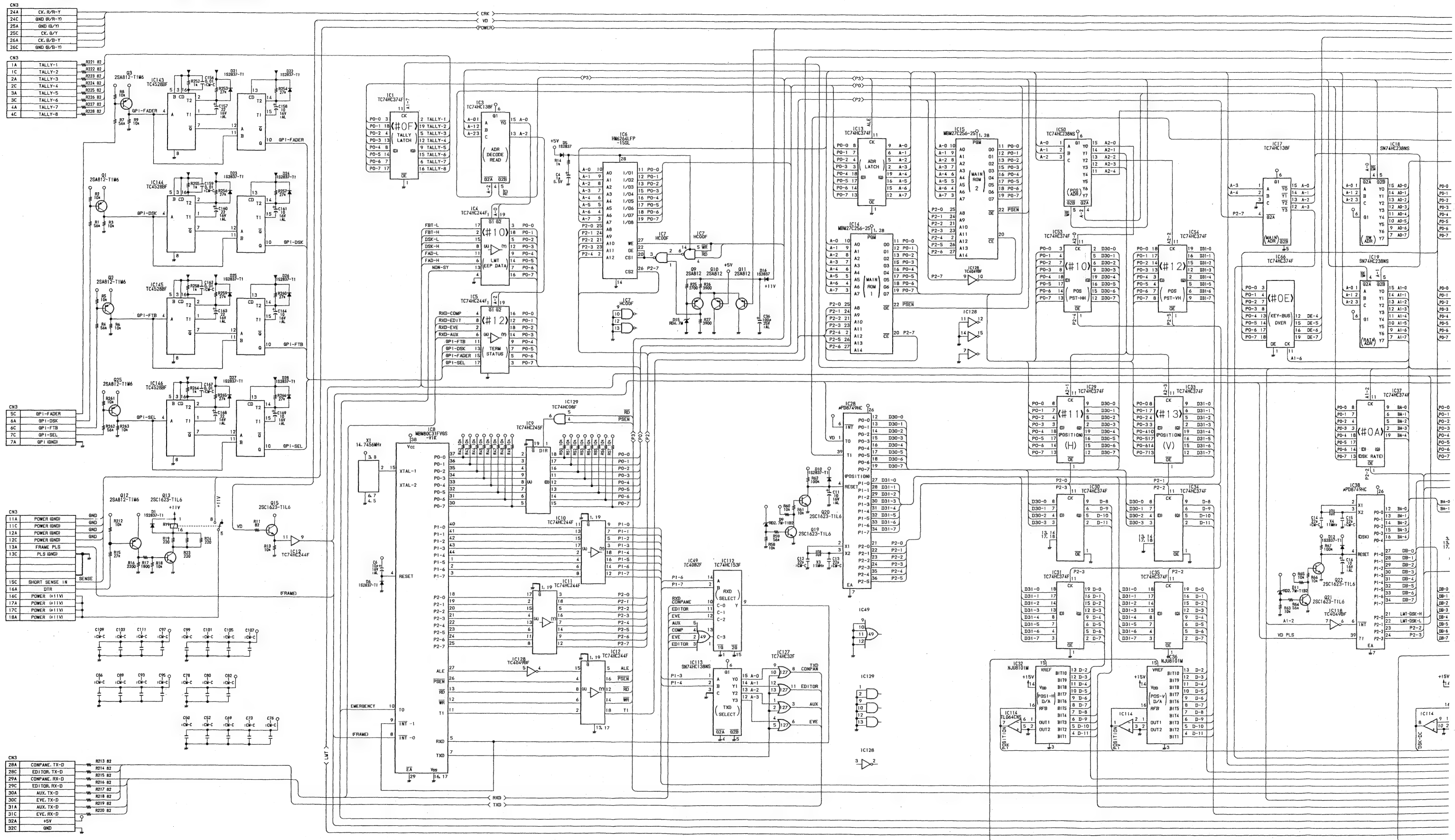


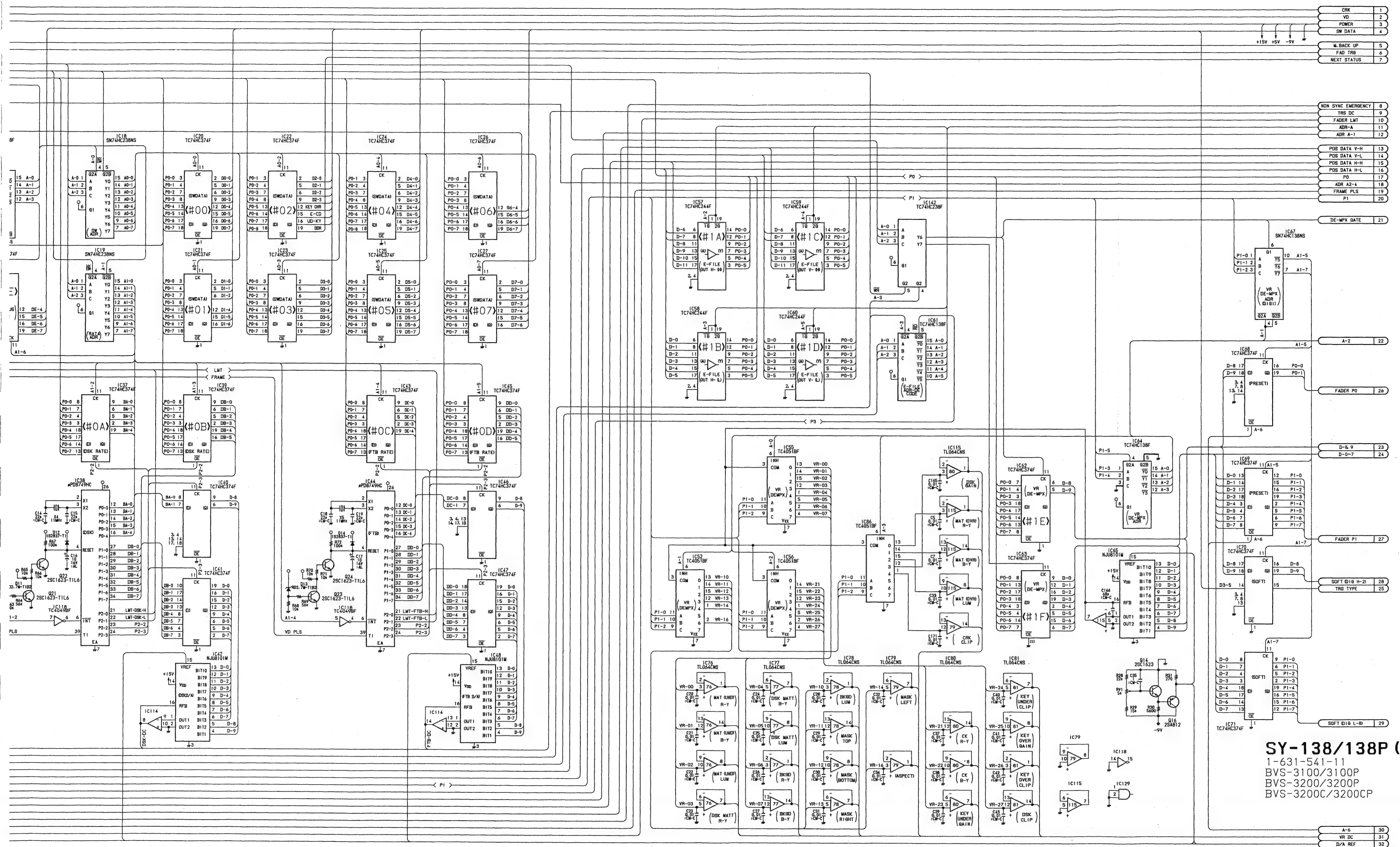
## 6



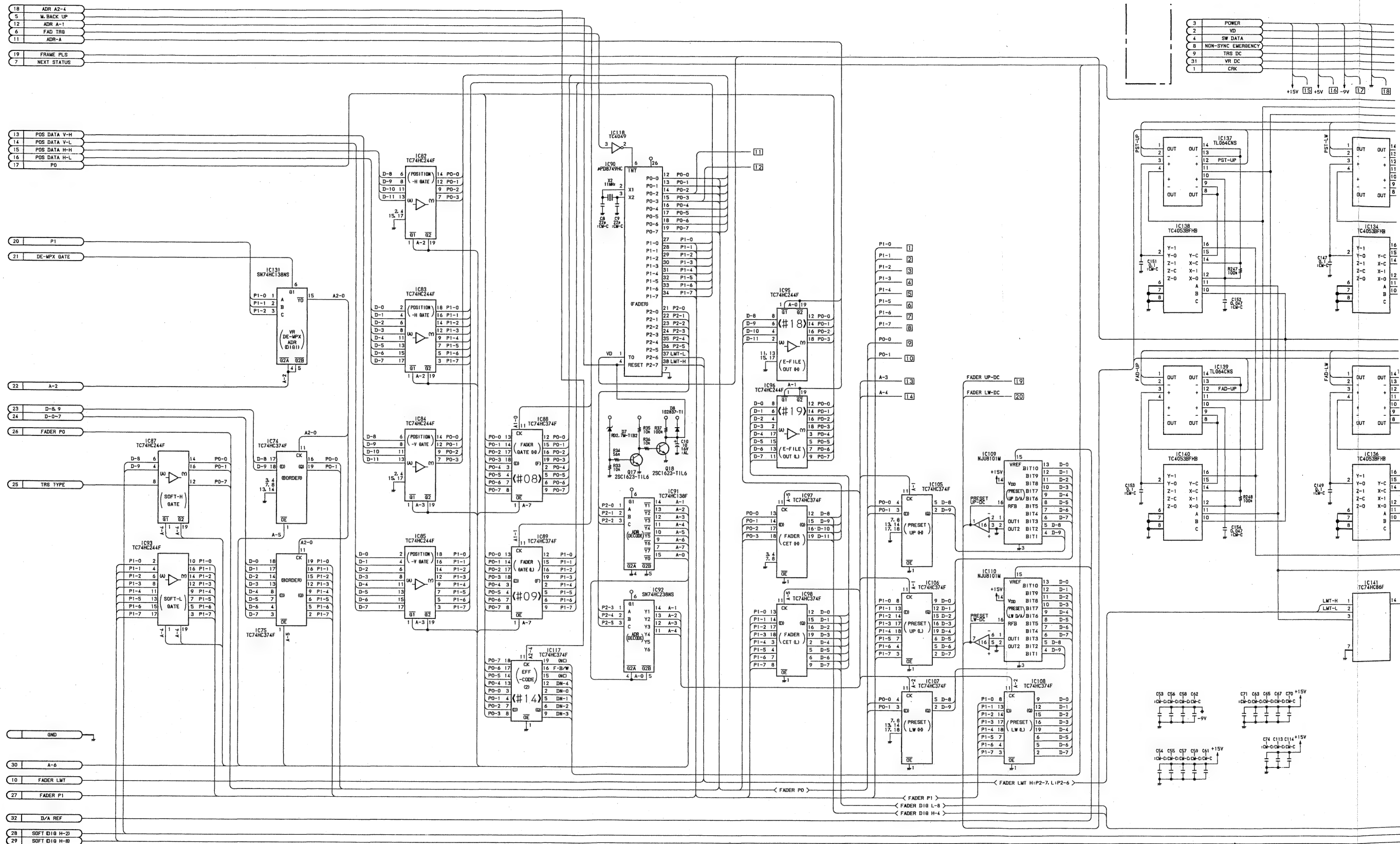


## SY-138/138P (1/2) SYSTEM CONTROL

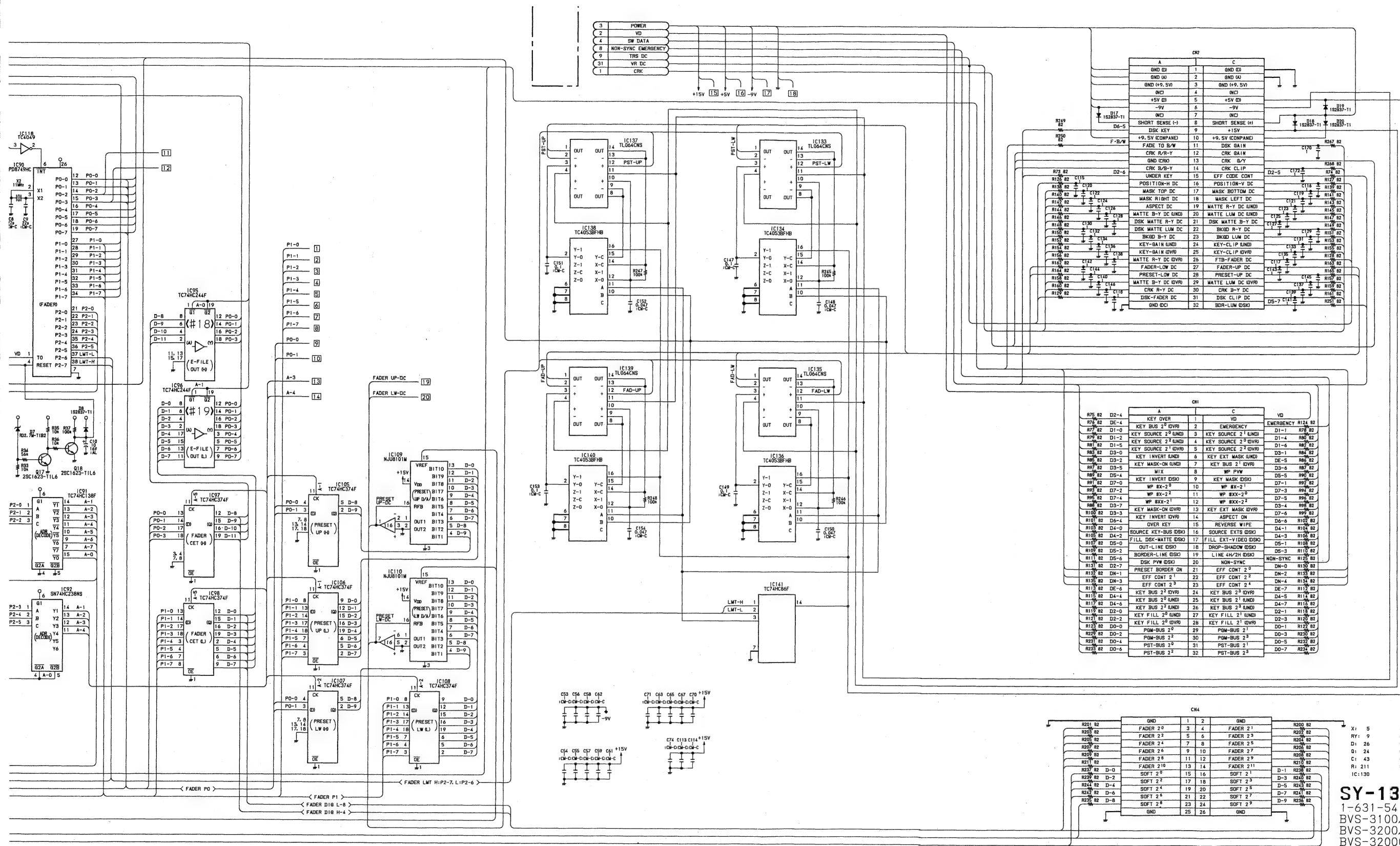




## SY-138/138P (2/2) SYSTEM CONTROL







SY-138/138P (2/2)

1-631-541-11  
 BVS-3100/3100P  
 BVS-3200/3200P  
 BVS-3200C/3200CP

## SY-154 PROCESS

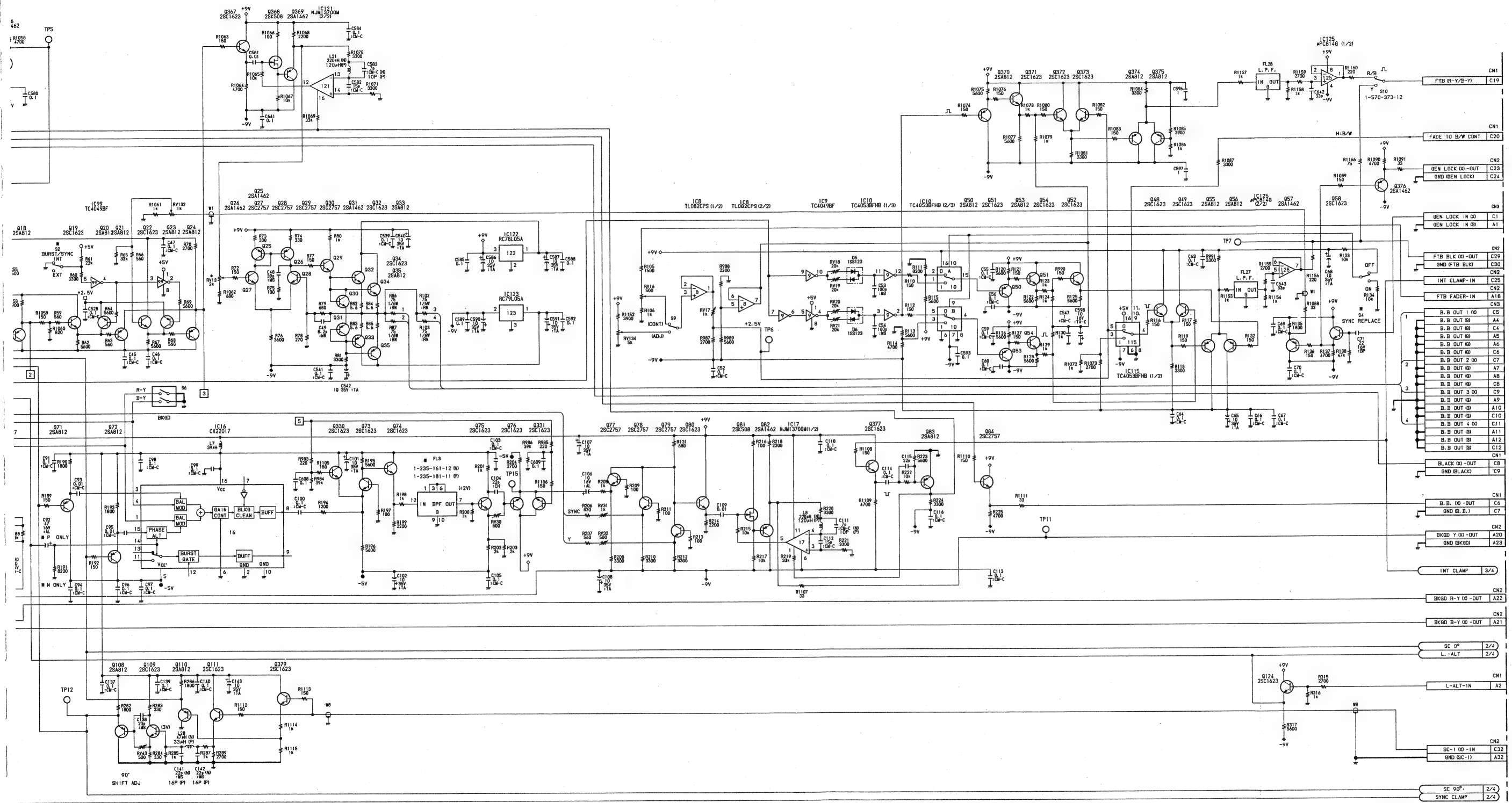
**SY-154**

1-632-259-11  
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP

3-SYX133-SD19#1



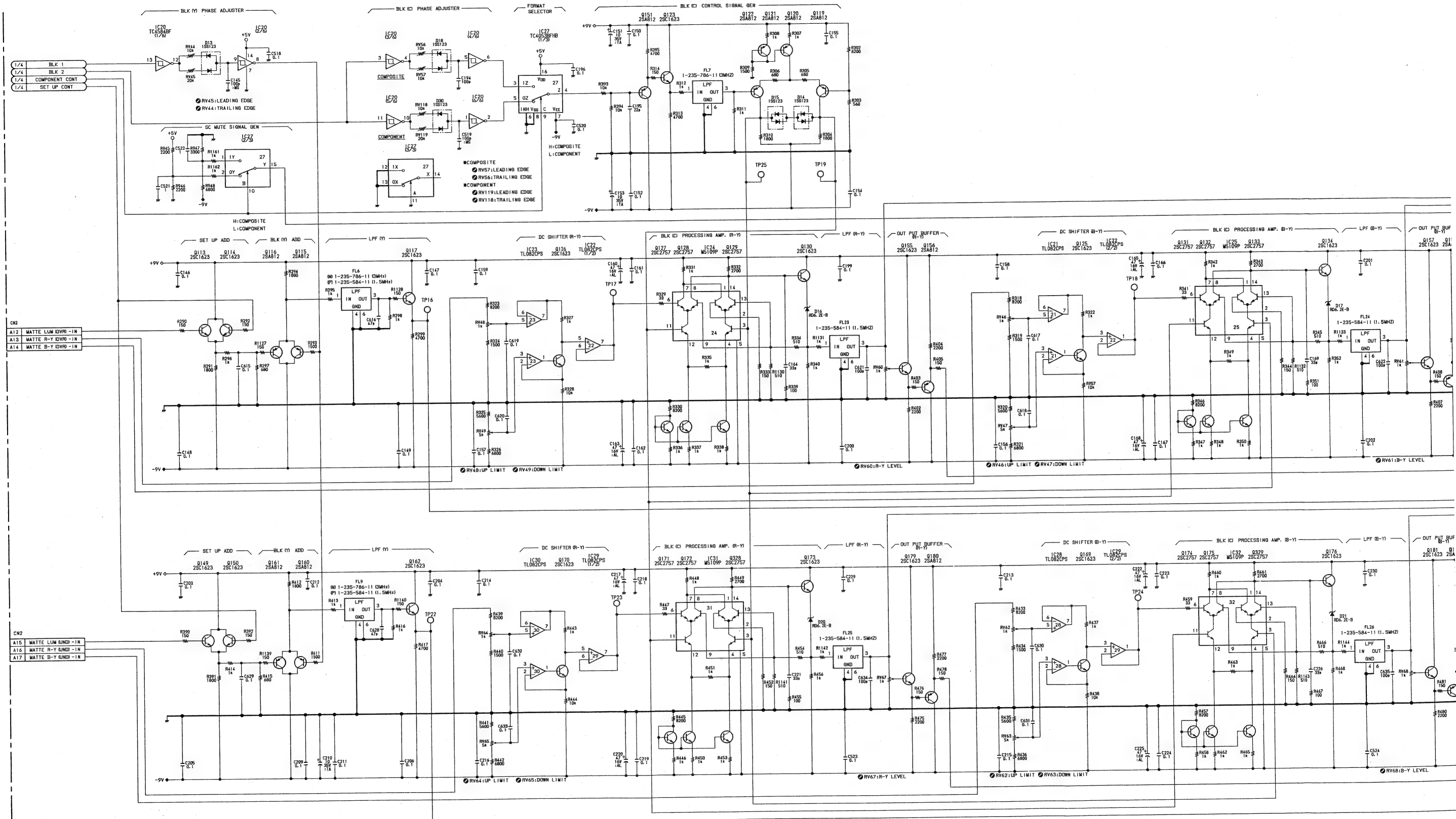


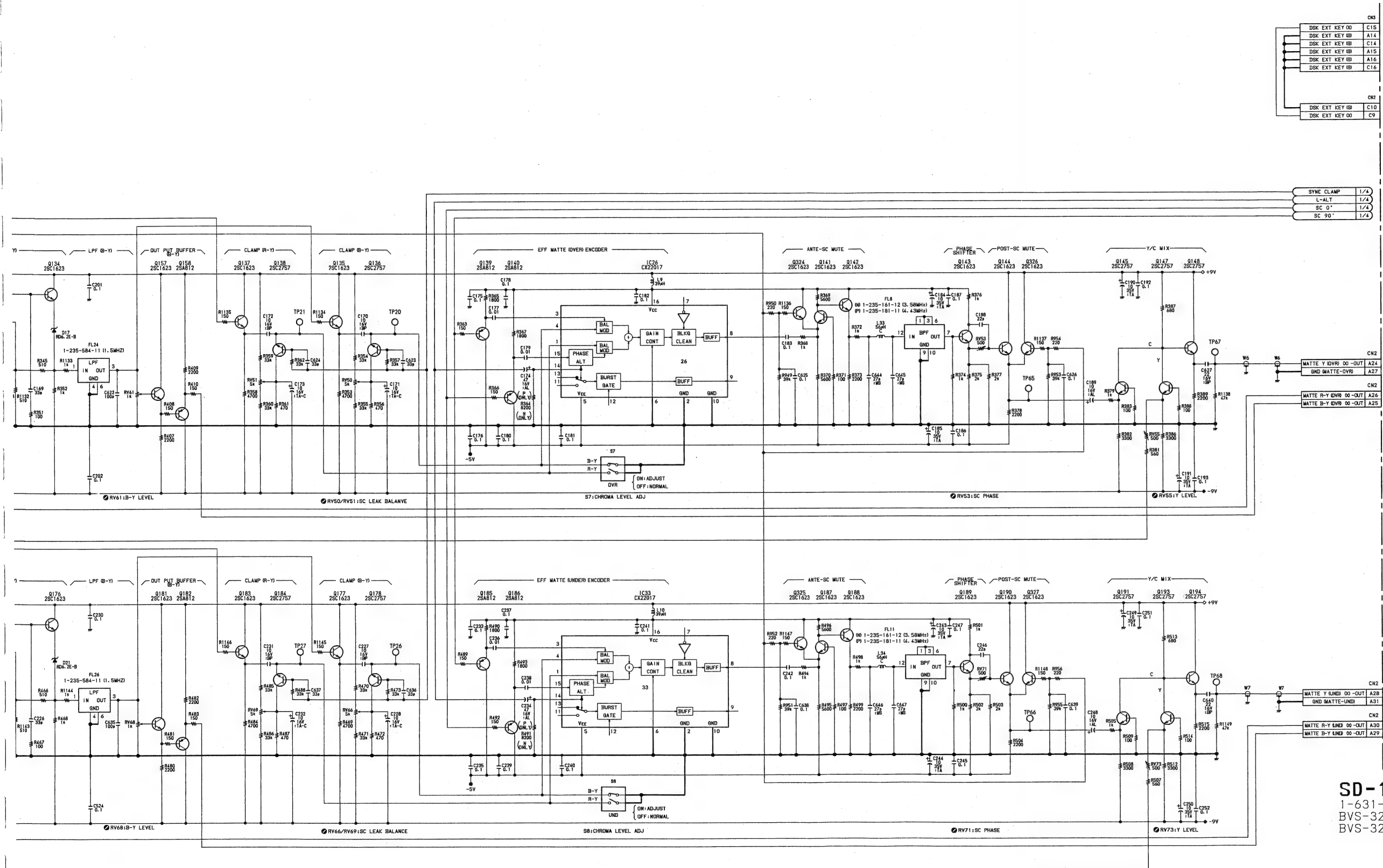


SD-19/19P (1/4)

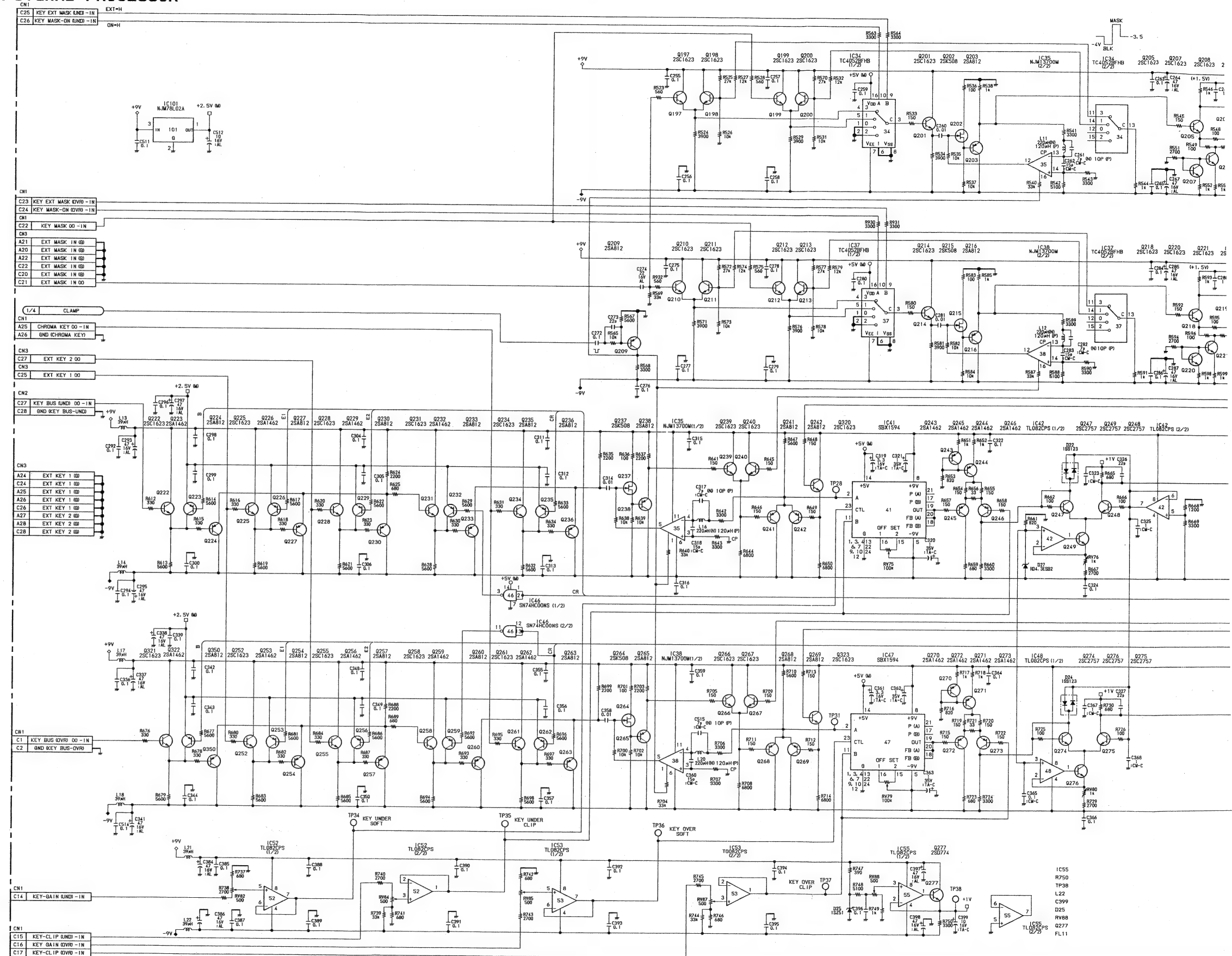
1-631-543-11  
BVS-3200/3200P  
BVS-3200C/3200CP

## SD-19/19P (2/4) SIGNAL GENERATOR FOR SIGNAL PROCESSOR

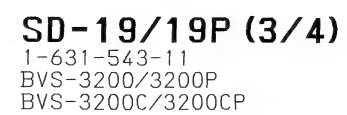




## SD-19/19P (3/4) SIGNAL GENERATOR FOR SIGNAL PROCESSOR



## SD-19/19P PROCESS

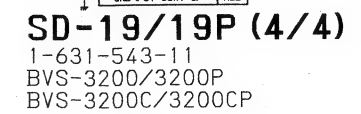




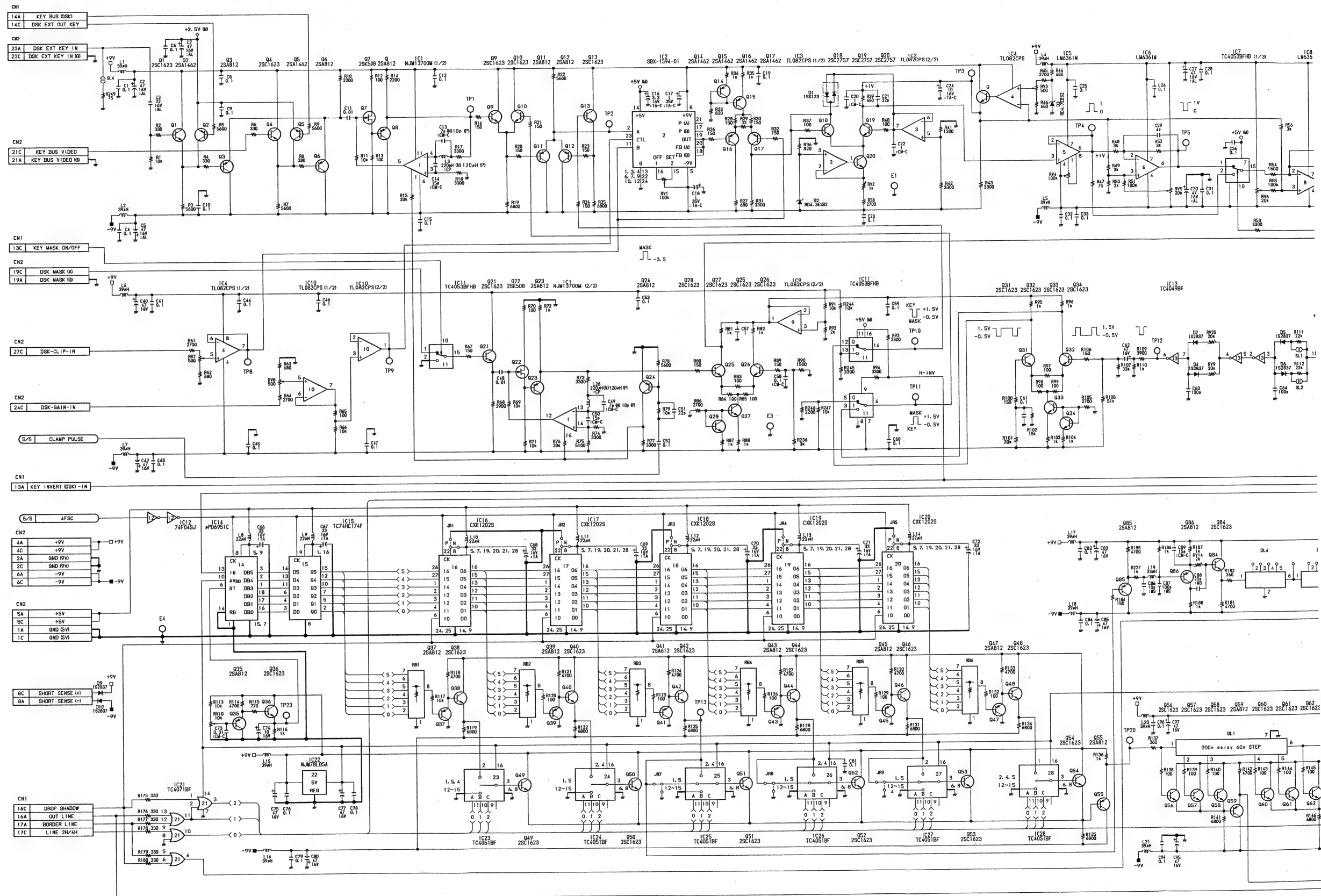
## 6



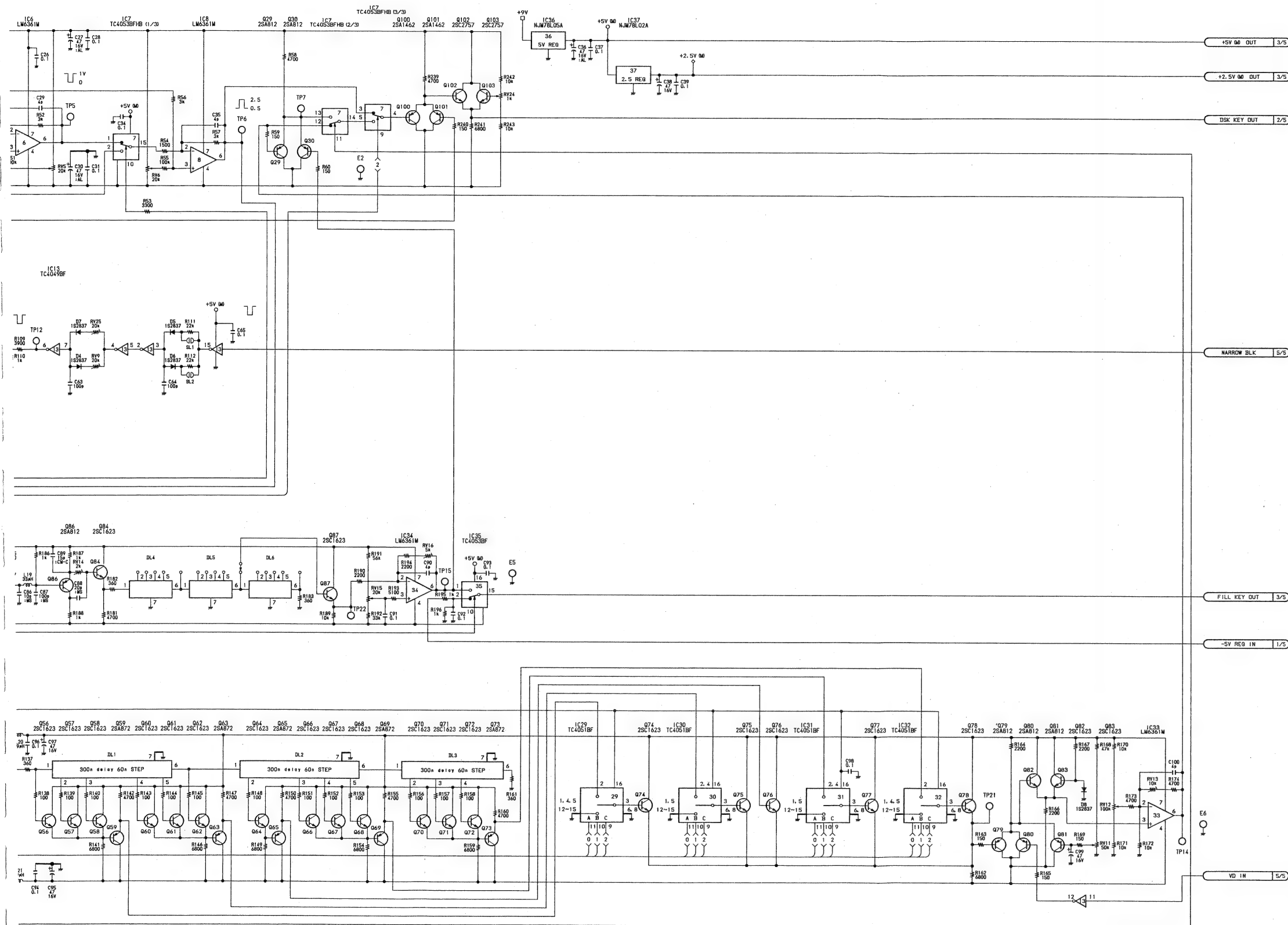
## SD-19/19P PROCESS



## SD-20/20P (1/5) SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR

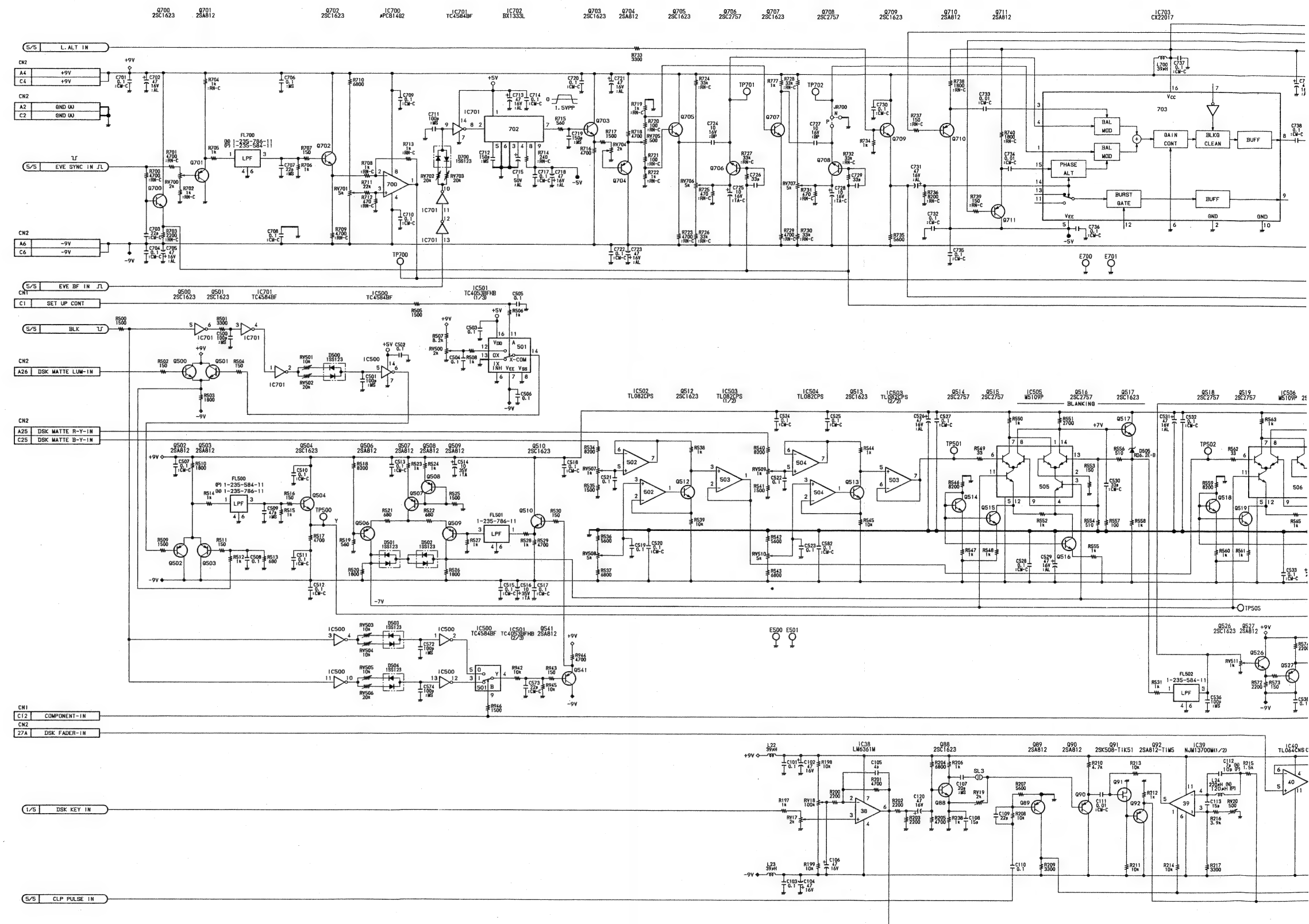


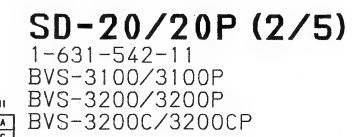




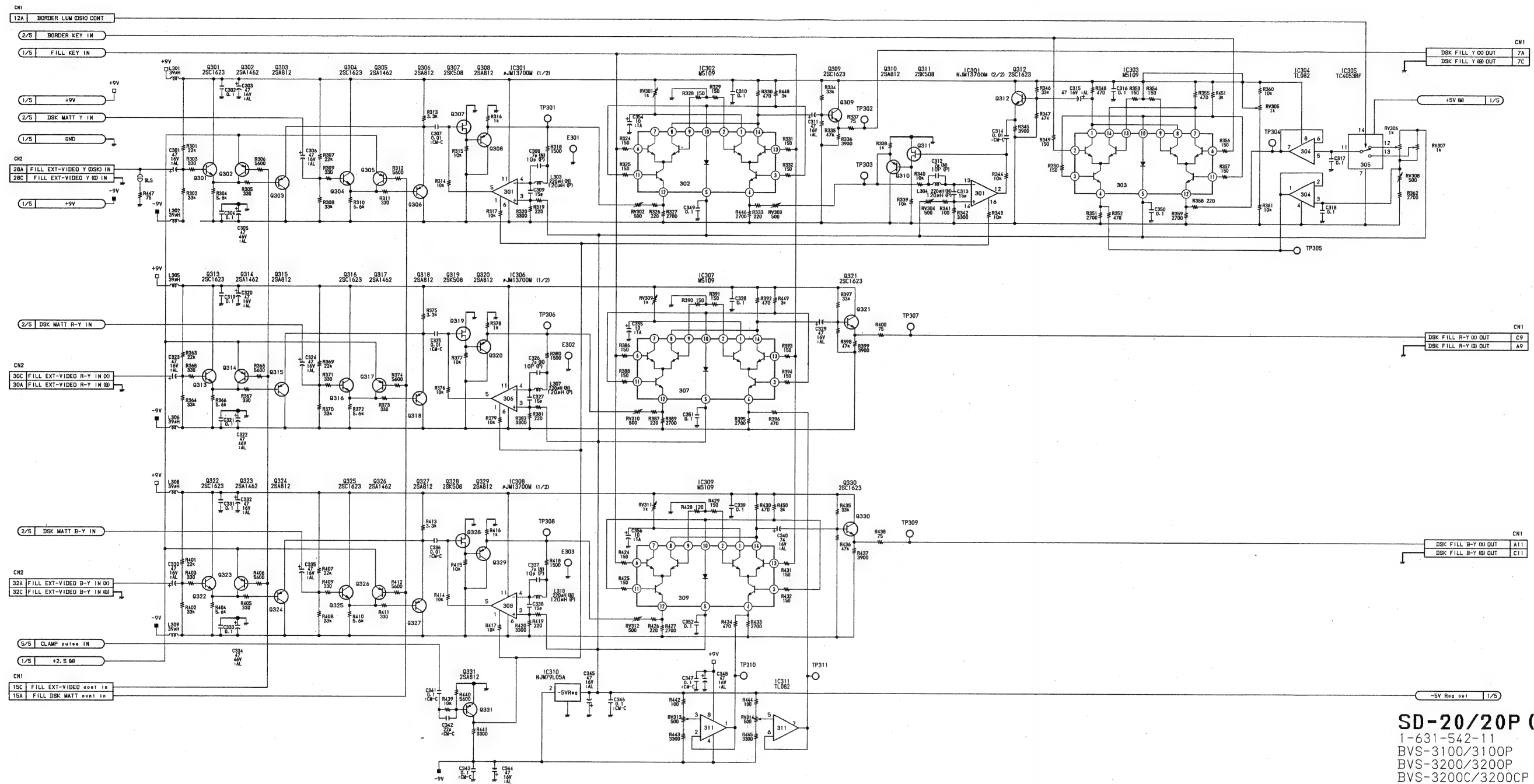
**SD-20/20P (1/5)**  
 1-631-542-11  
 BVS-3100/3100P  
 BVS-3200/3200P  
 BVS-3200C/3200CP

## SD-20/20P (2/5) SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR





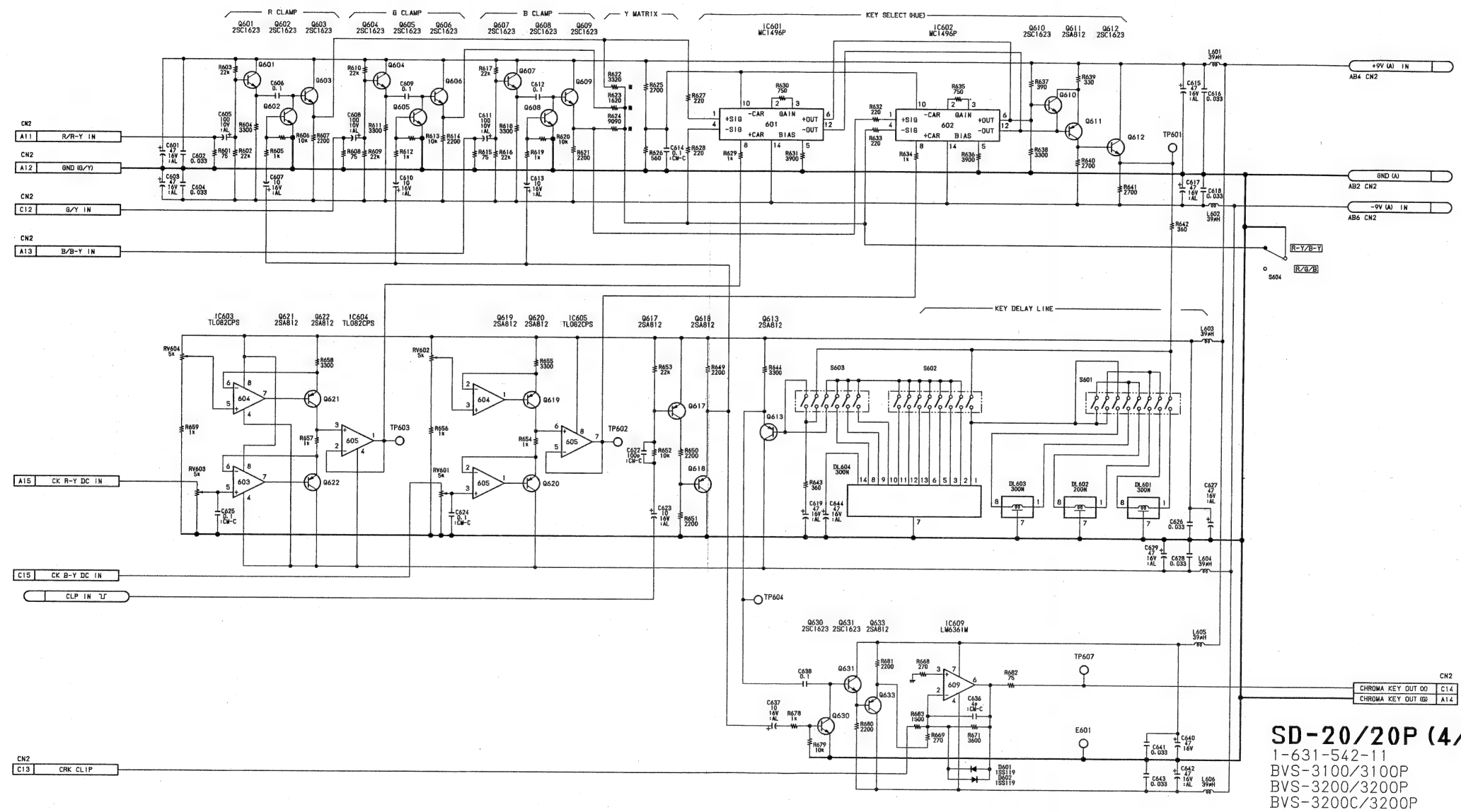
## SD-20/20P (3/5) SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR



SD-20/20P (3/5)

1-631-542-11  
 BVS-3100/3100P  
 BVS-3200/3200P  
 BVS-3200C/3200CP

## SD-20/20P (4/5) SYNC GENERATOR CHROMA KEY DOWN STREAM KEY SIGNAL GENERATOR

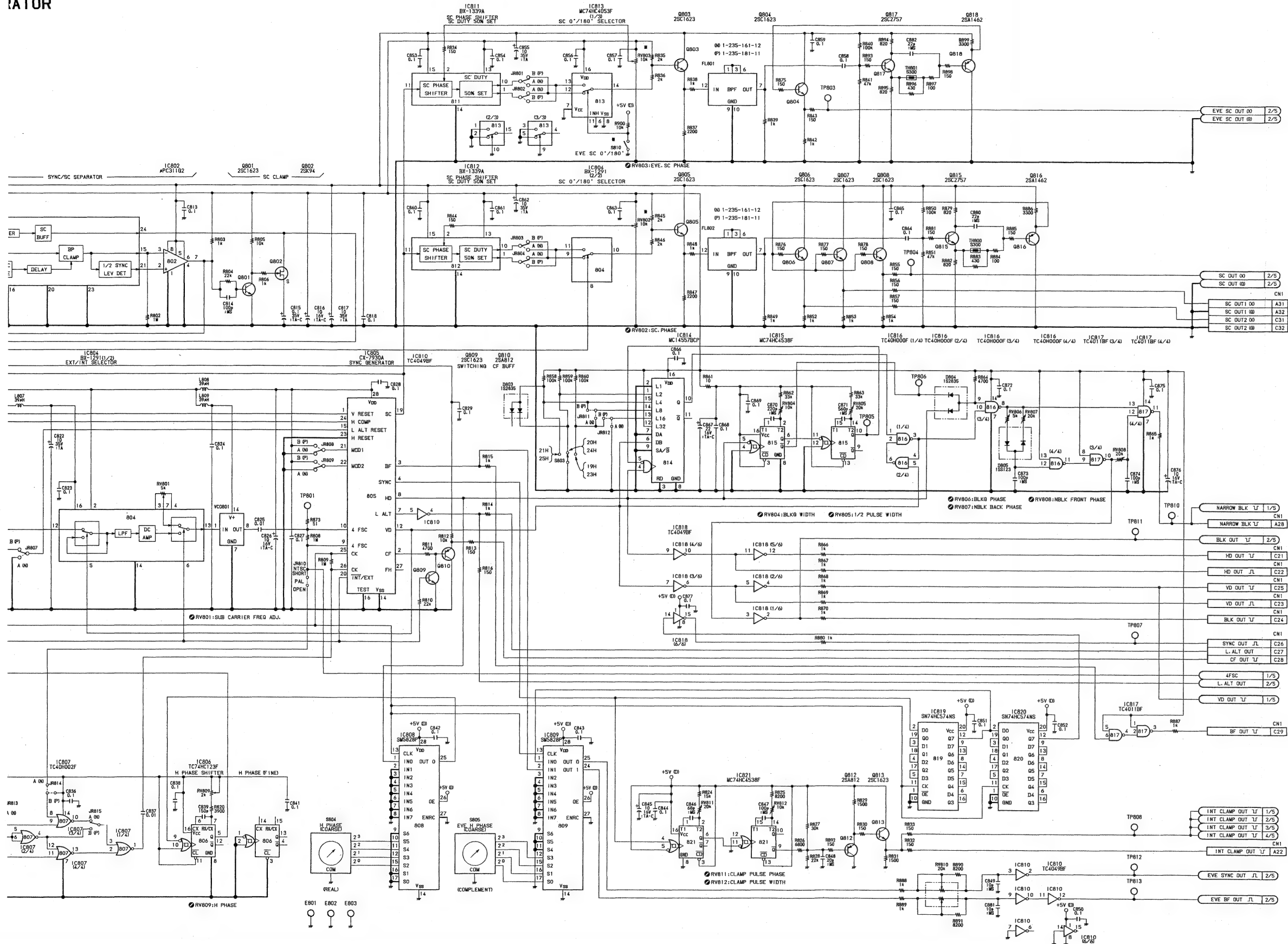


## 6





IATOR



SD-20/20P (5/5)

1-631-542-11  
 BVS-3100/3100P  
 BVS-3200/3200P  
 BVS-3200C/3200CP

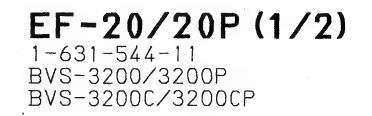
EF-20/20P PRPCESS

## SYX133-EF20#1

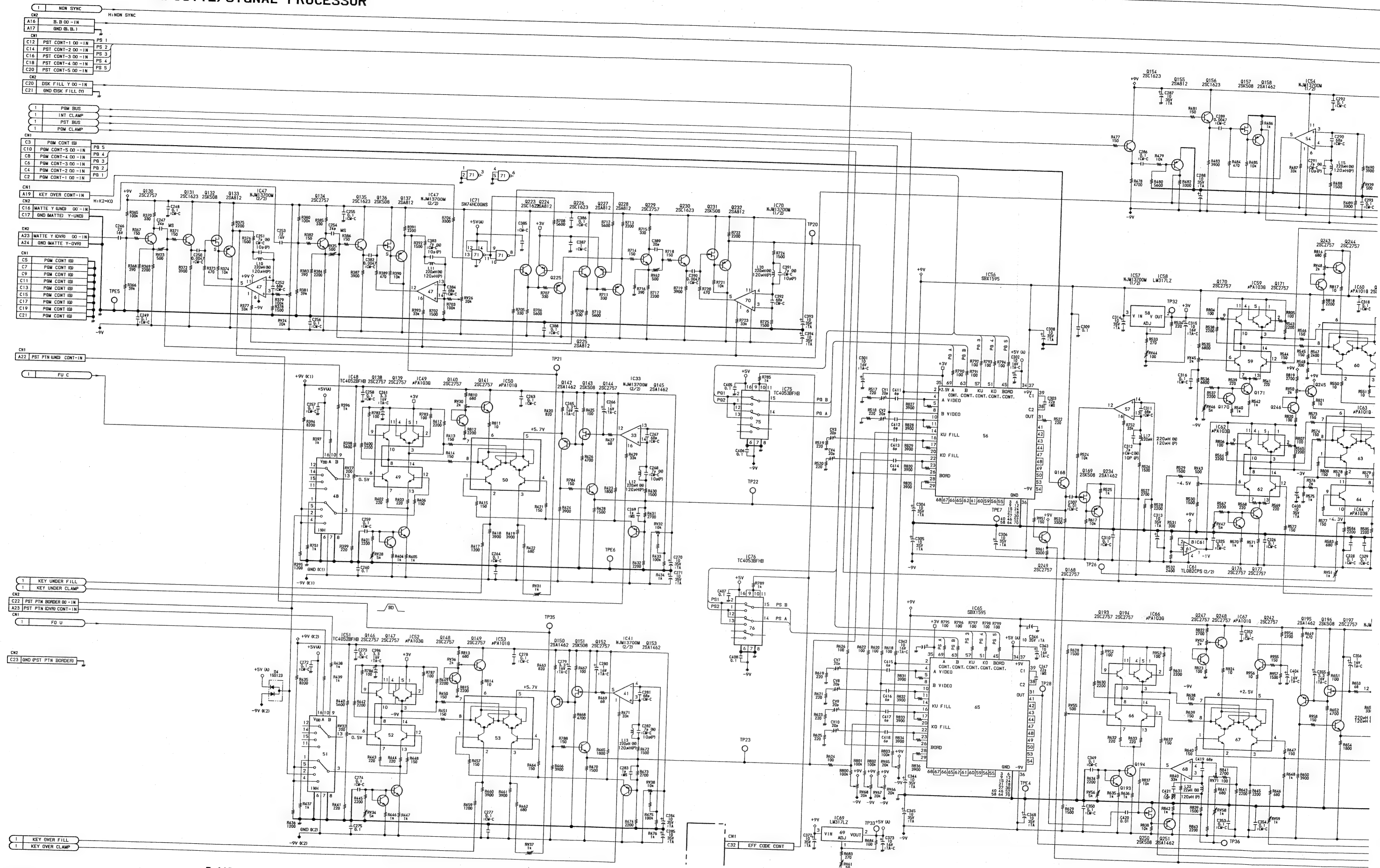




## EF-20/20P PROCESS



## EF-20/20P (2/2) Y (COMPOSITE) SIGNAL PROCESSOR



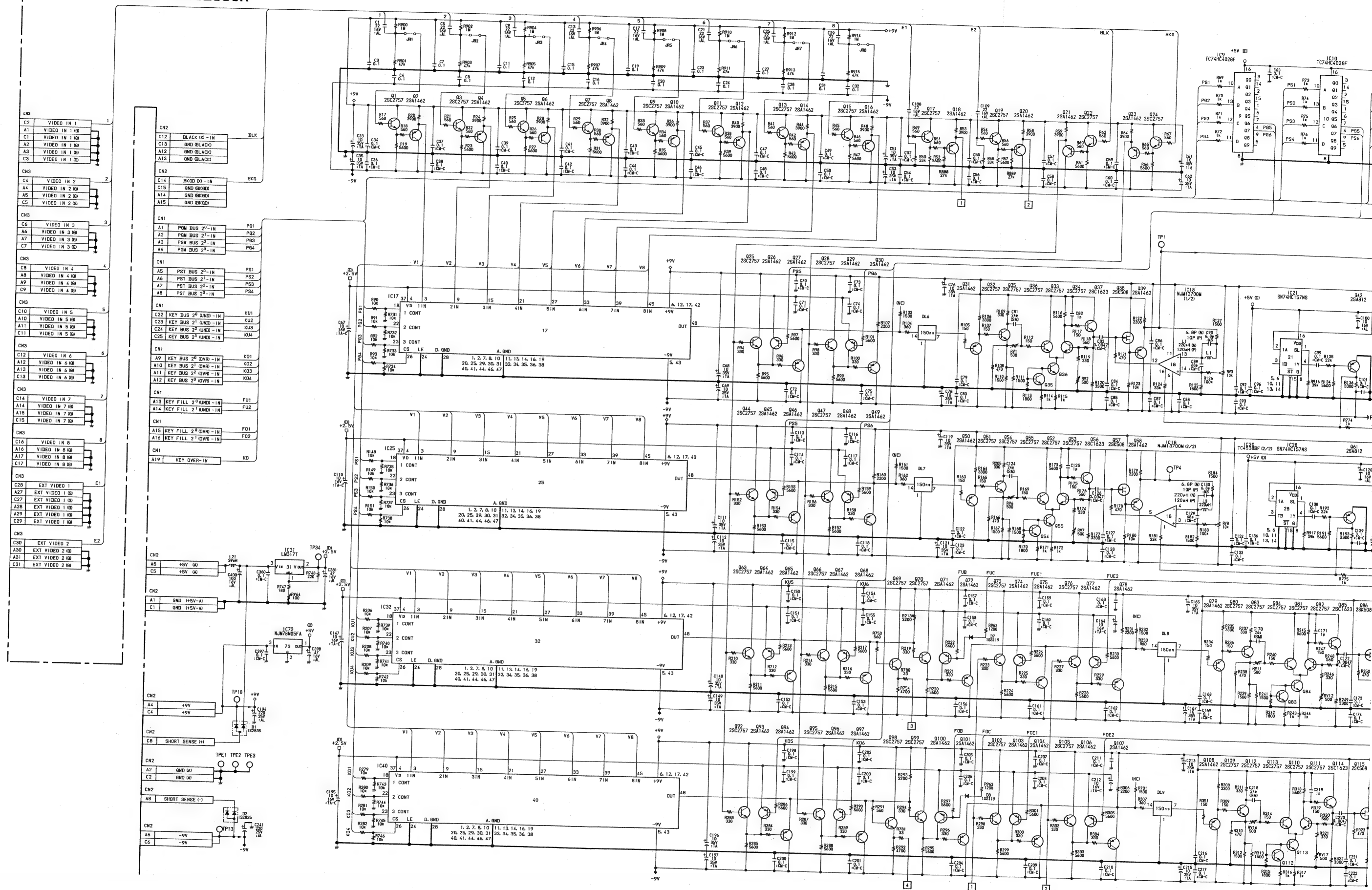
B-SYX133-EF20#2

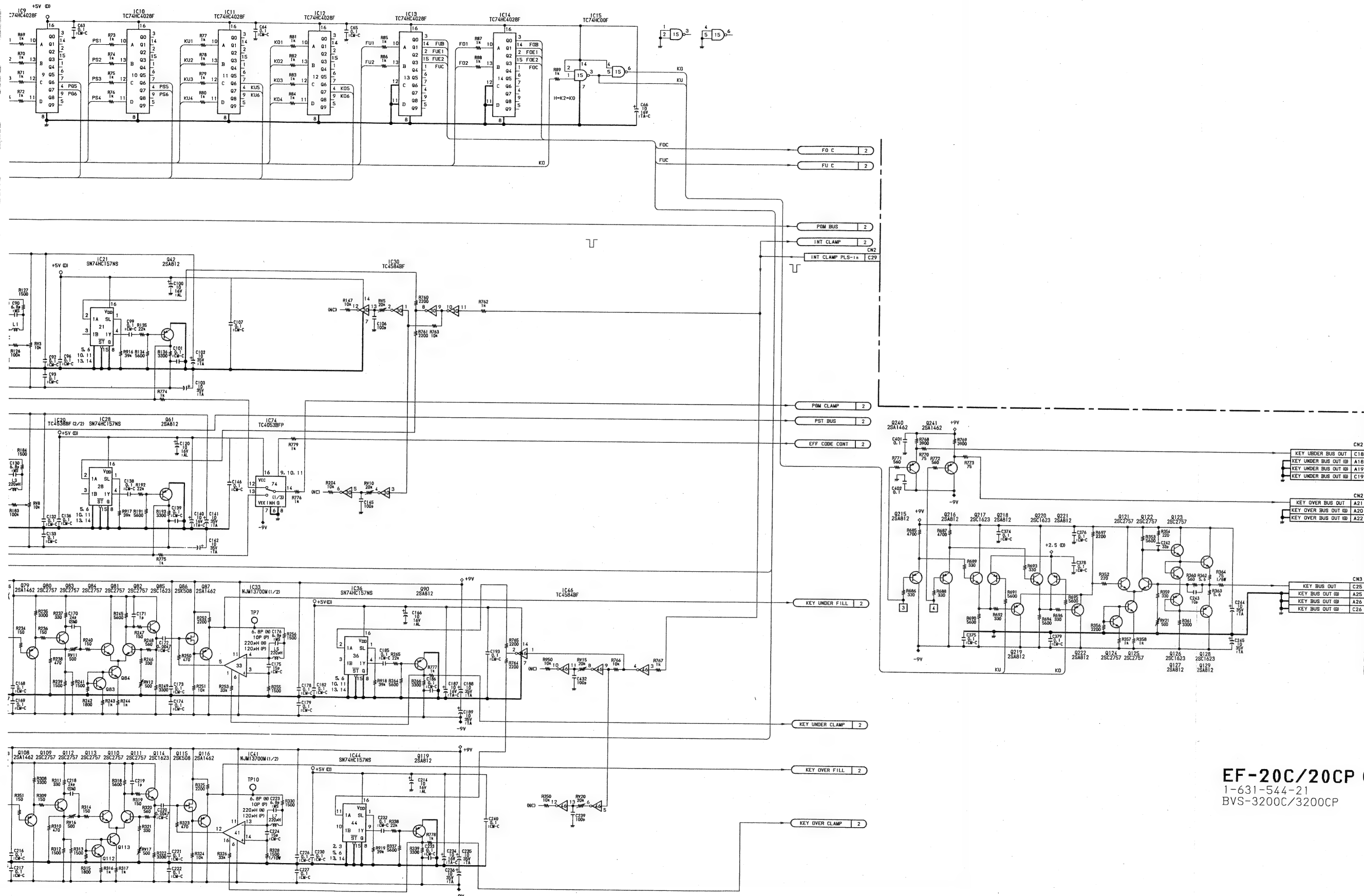
7-112

7-113

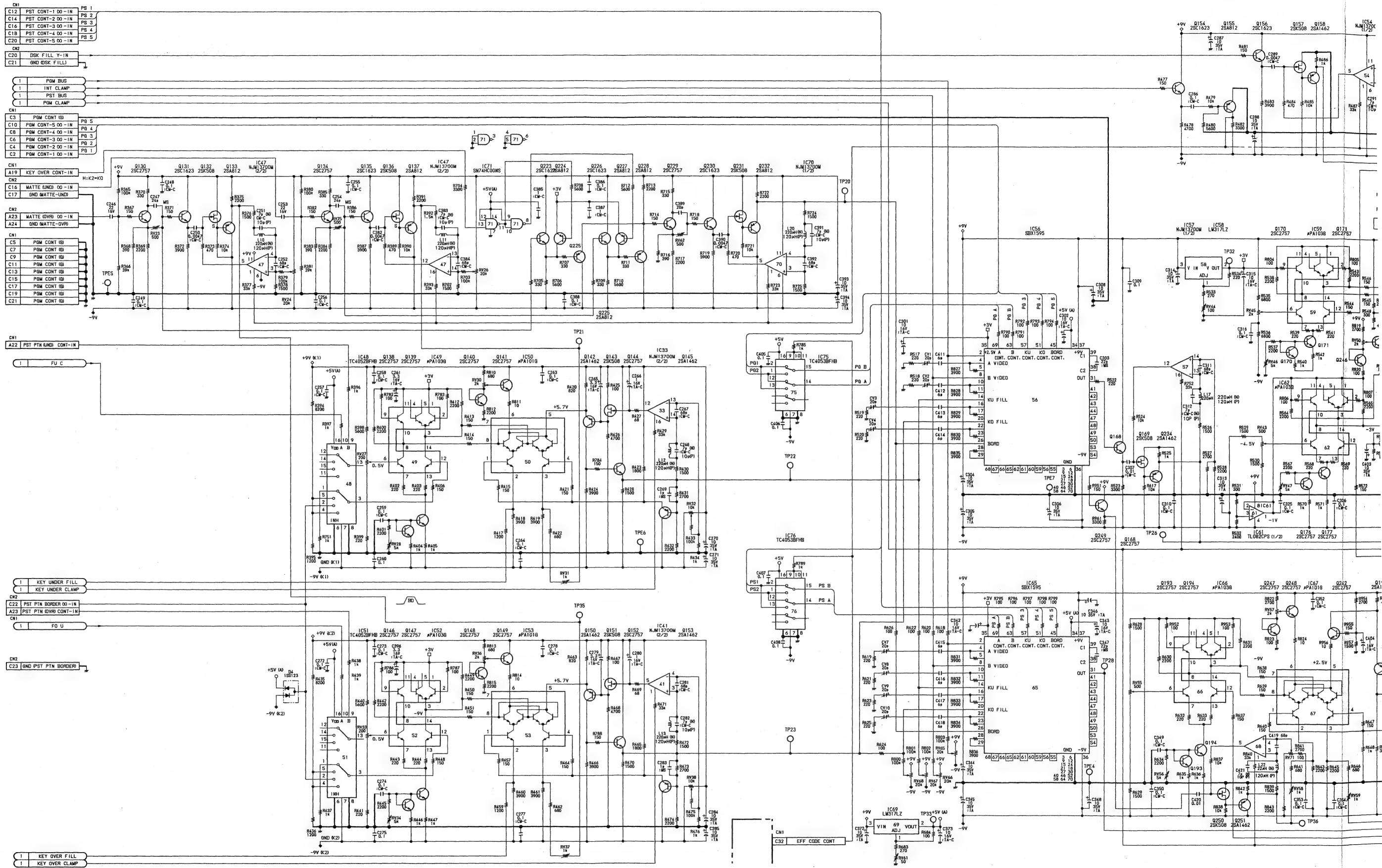


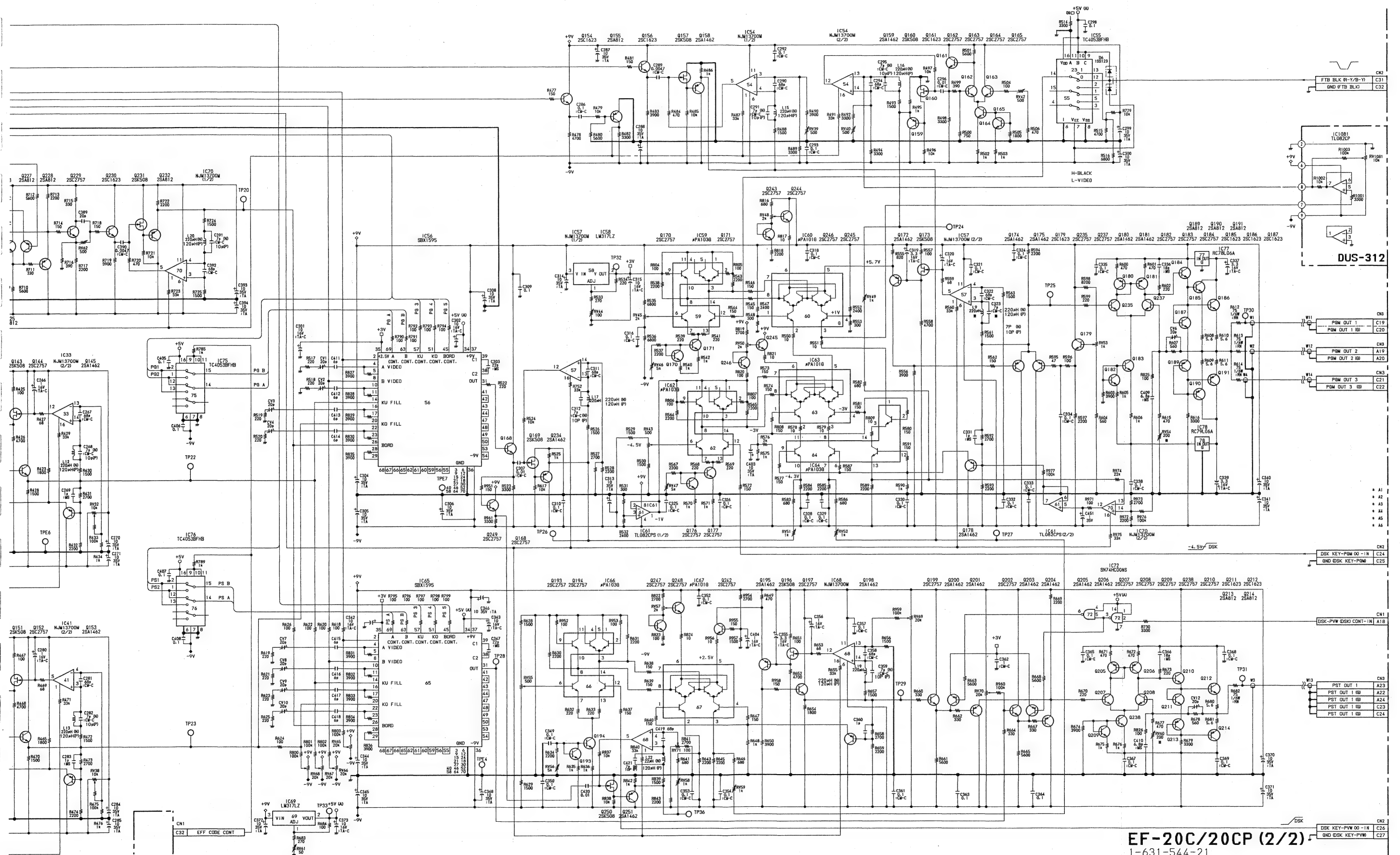






EF-20C/20CP (2/2) B-Y (R-Y) SIGNAL PROCESSOR







The diagram illustrates the internal circuitry of a 14-inch color television receiver. It features a complex arrangement of electronic components, including transistors, integrated circuits, resistors, capacitors, and a vacuum tube. The circuit is organized into several functional sections:

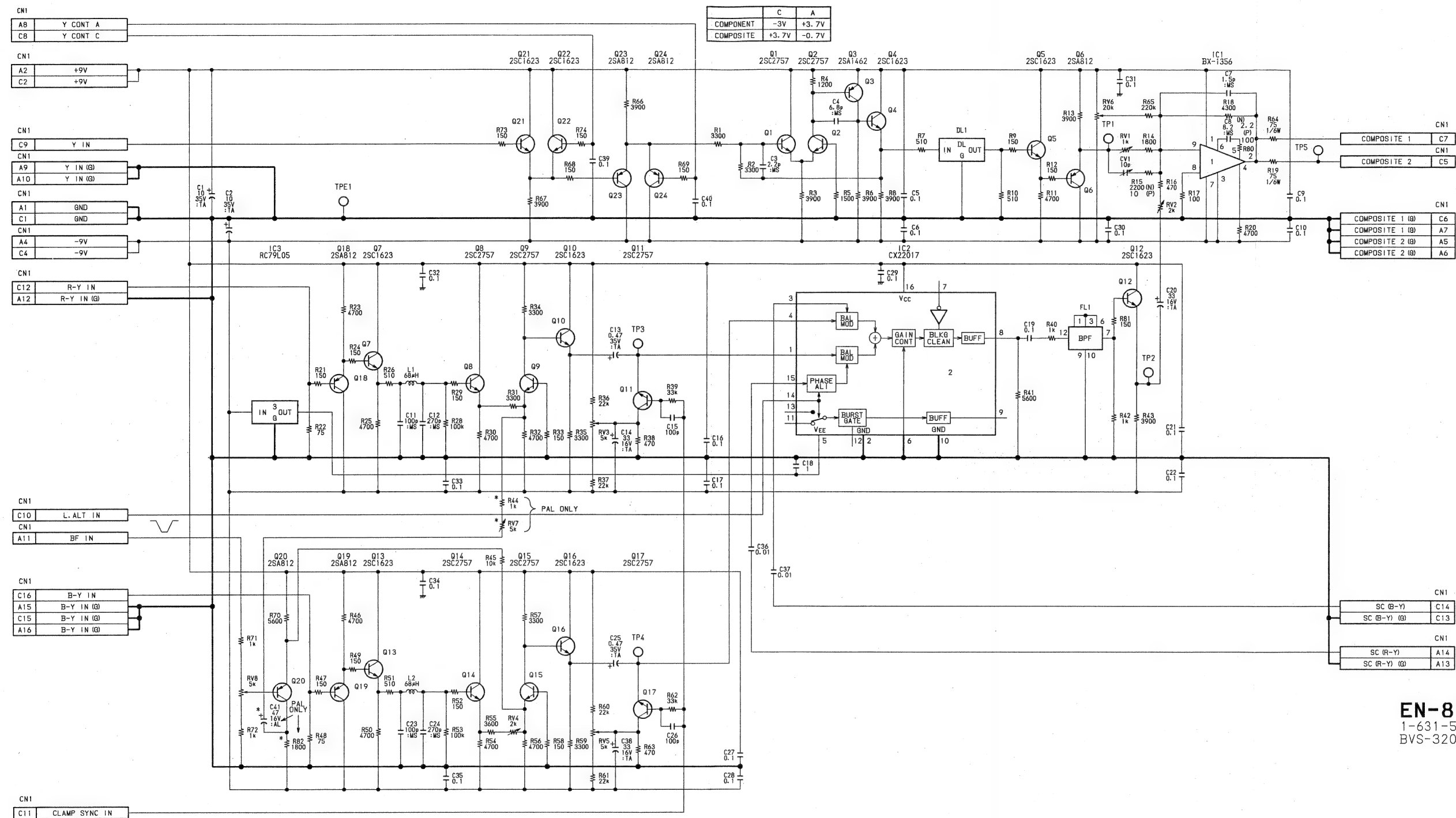
- Power Supply Section:** Located at the top left, it includes a power transformer (TPE1) and a 6X4 vacuum tube for full-wave rectification. It provides +9V and -9V rails.
- Video Processing Section:** This section handles the video signal, including sync and clamp pulses. It features transistors Q1-Q10 and IC1 (NMJ3200M) for signal processing.
- Audio Processing Section:** Located in the middle right, it includes transistors Q11-Q14 and IC2 (272) for audio signal processing.
- Control and Timing Section:** This section includes transistors Q15-Q18 and IC3 (M5109P) for timing and control functions.
- Output Section:** The bottom right section includes transistors Q19-Q24 and IC4 (M5109P) for driving the output devices.

The diagram is a detailed schematic showing the physical layout of components on a printed circuit board. Components are labeled with their values and types, and the circuit is organized into functional blocks. The diagram is a single-page layout with a grid background, showing the physical arrangement of components on a printed circuit board.

7-132

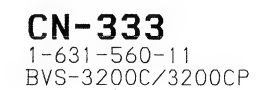


## EN-80/80P ENCODER BOARD

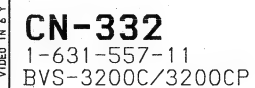


EN-80  
1-631-559-11  
BVS-3200C/3200CP

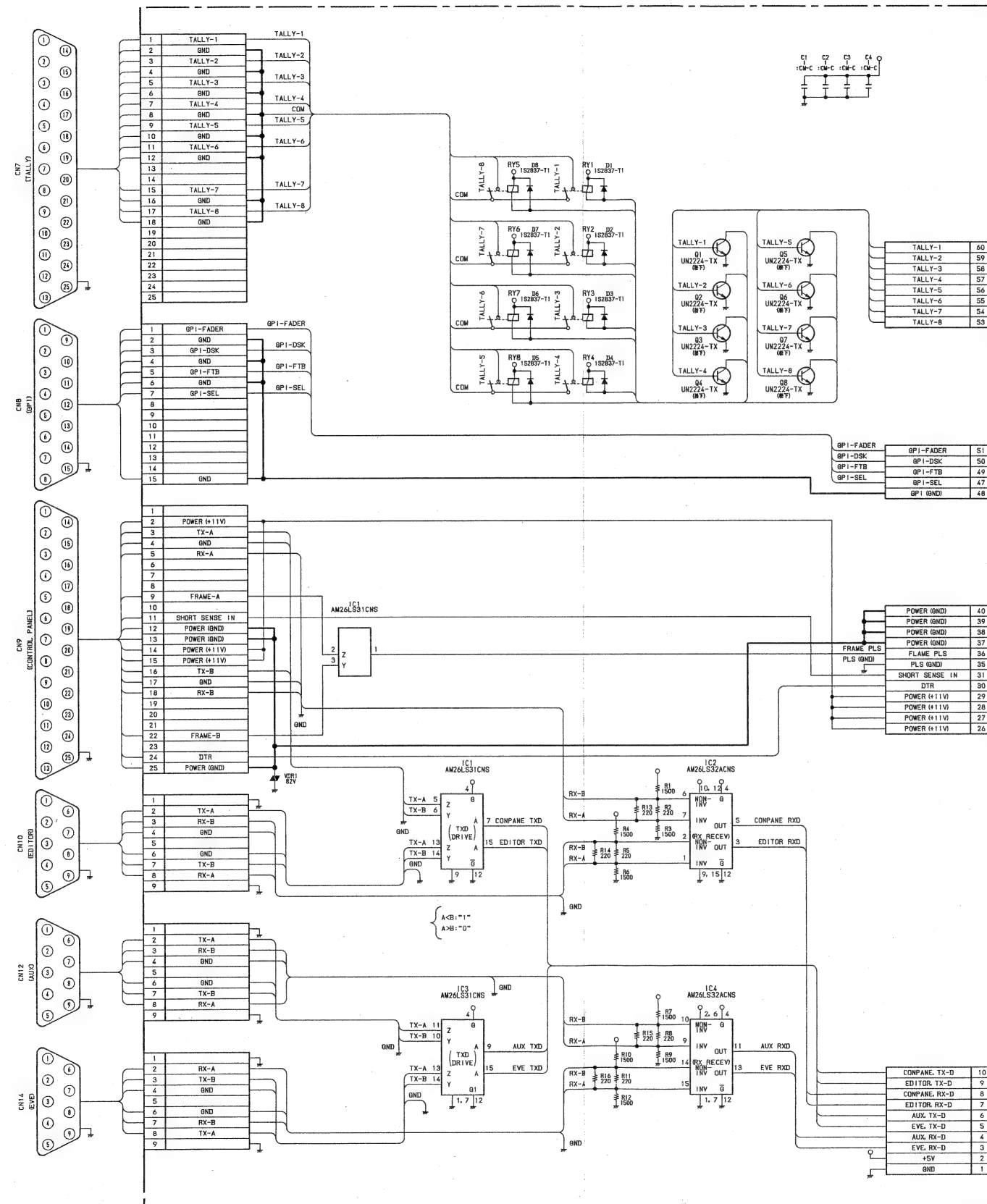
B-SYX133-CN333-M



**CN-332 PROCESS**

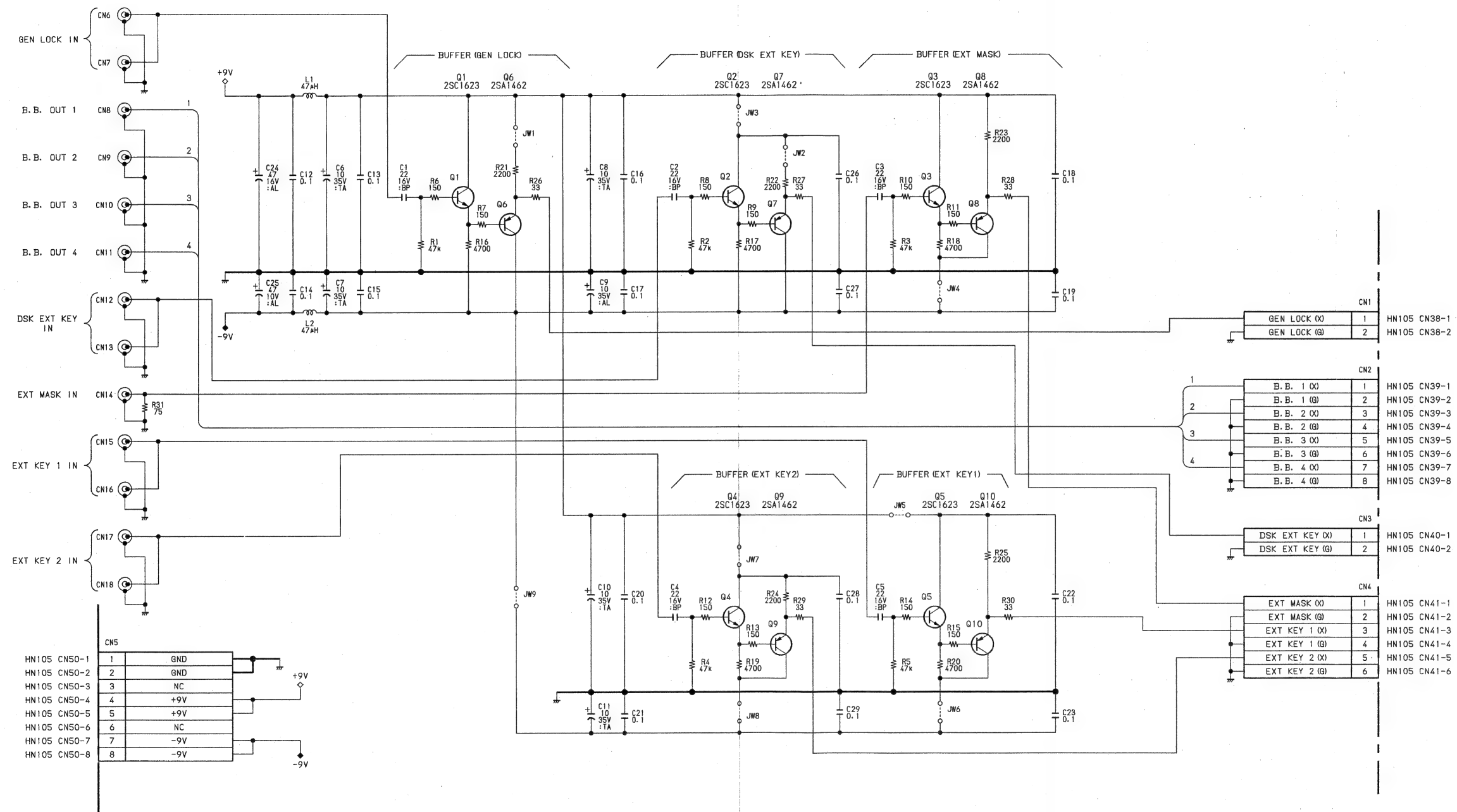


## CN-336 CONNECTOR BOARD



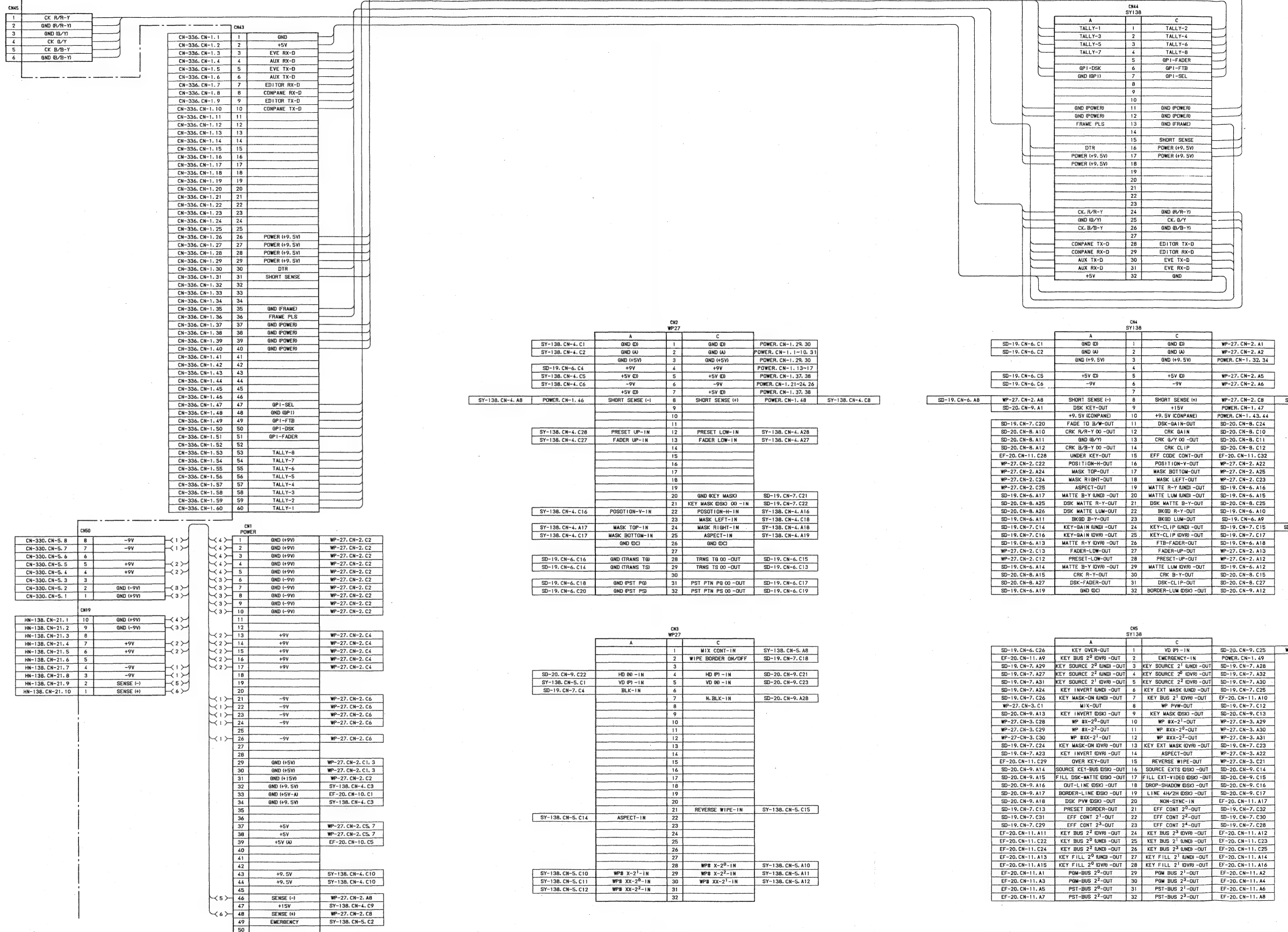
**CN-336**  
 1-631-556-11  
 BVS-3200C/3200CP

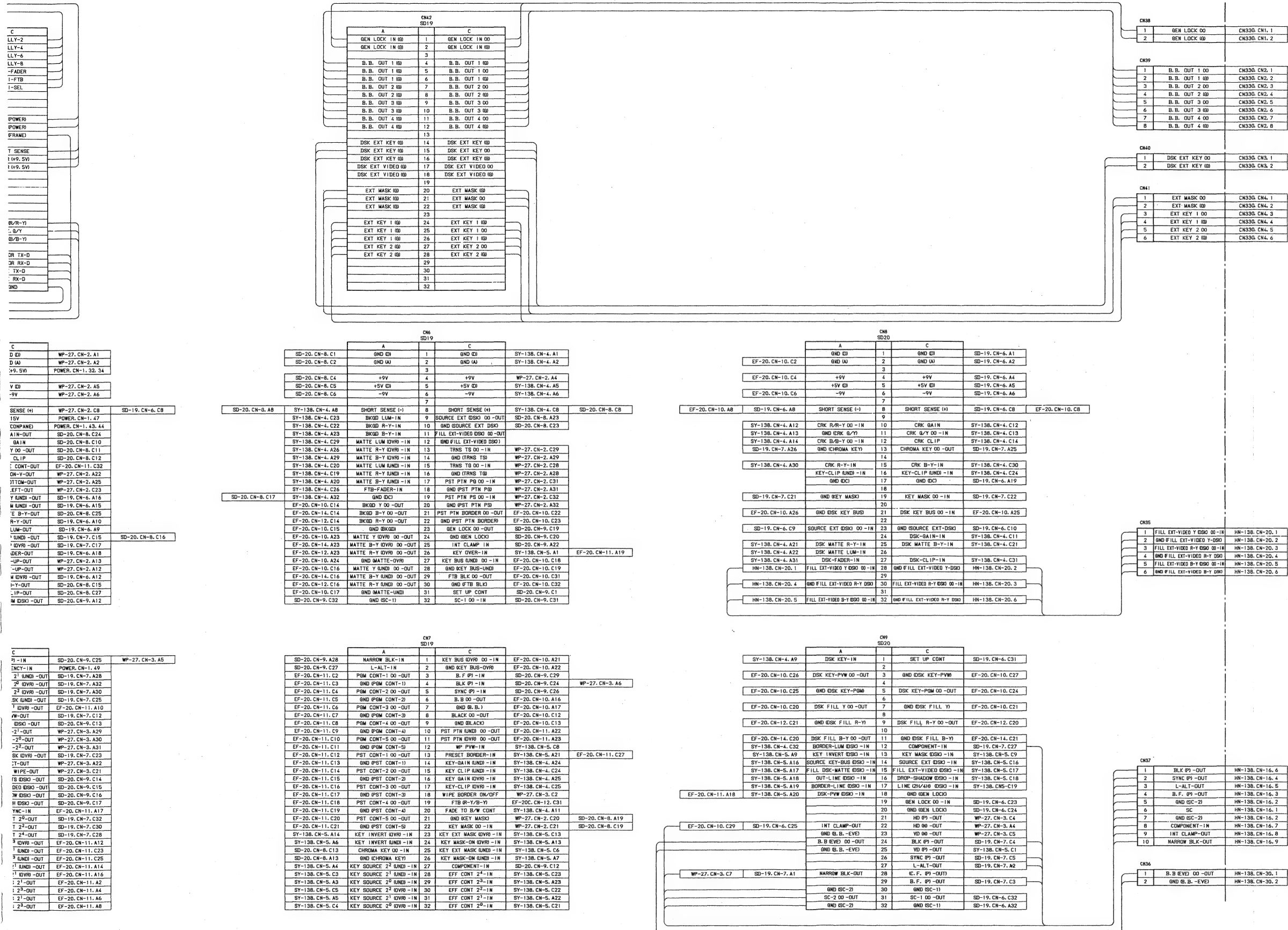
## CN-330 CONNECTOR BOARD



**CN-330**  
1-631-792-11  
BVS-3200C/3200CP

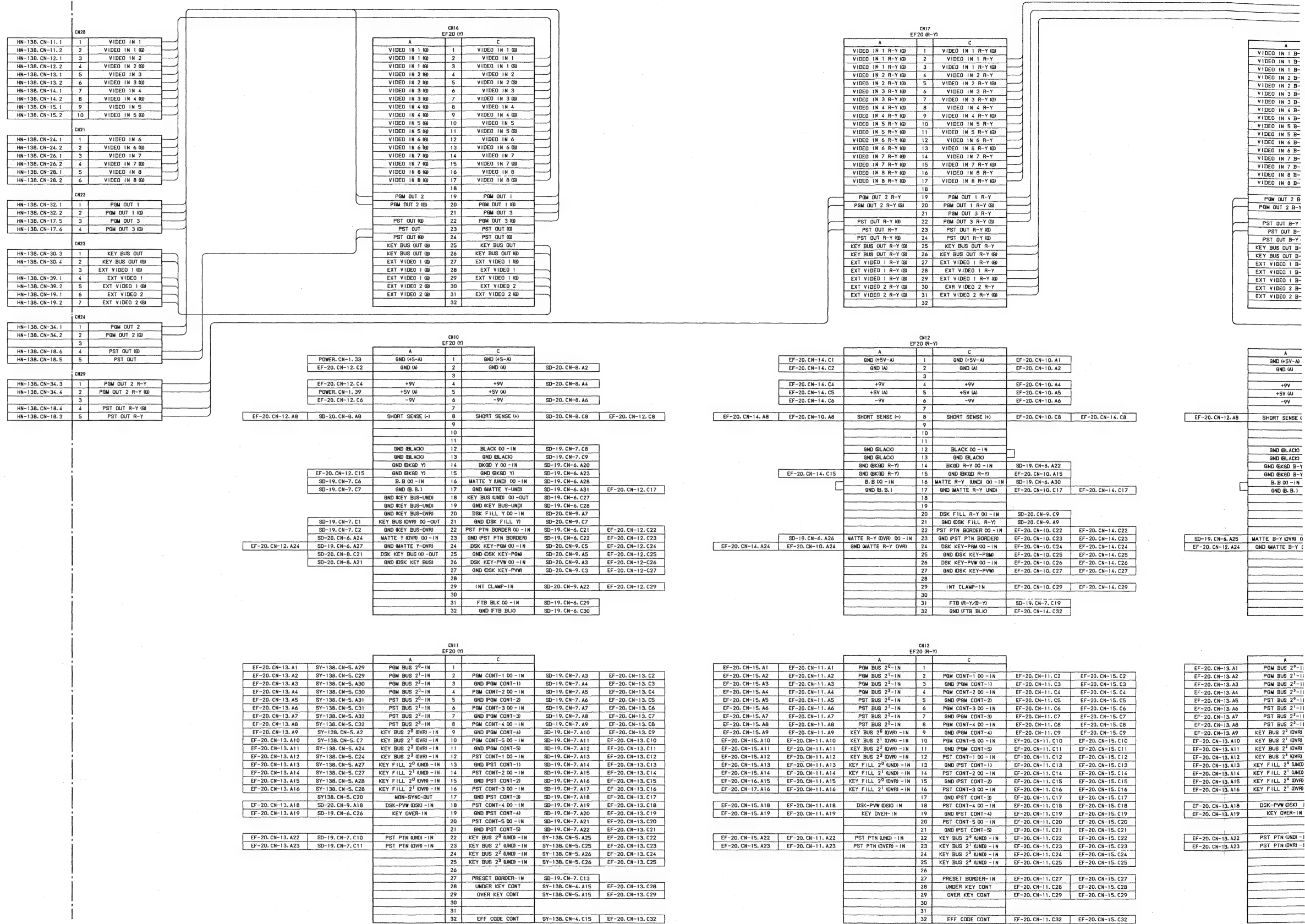
## CN45





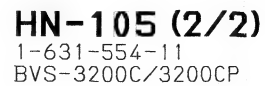


## HN-105 (2/2) MOTHER BOARD



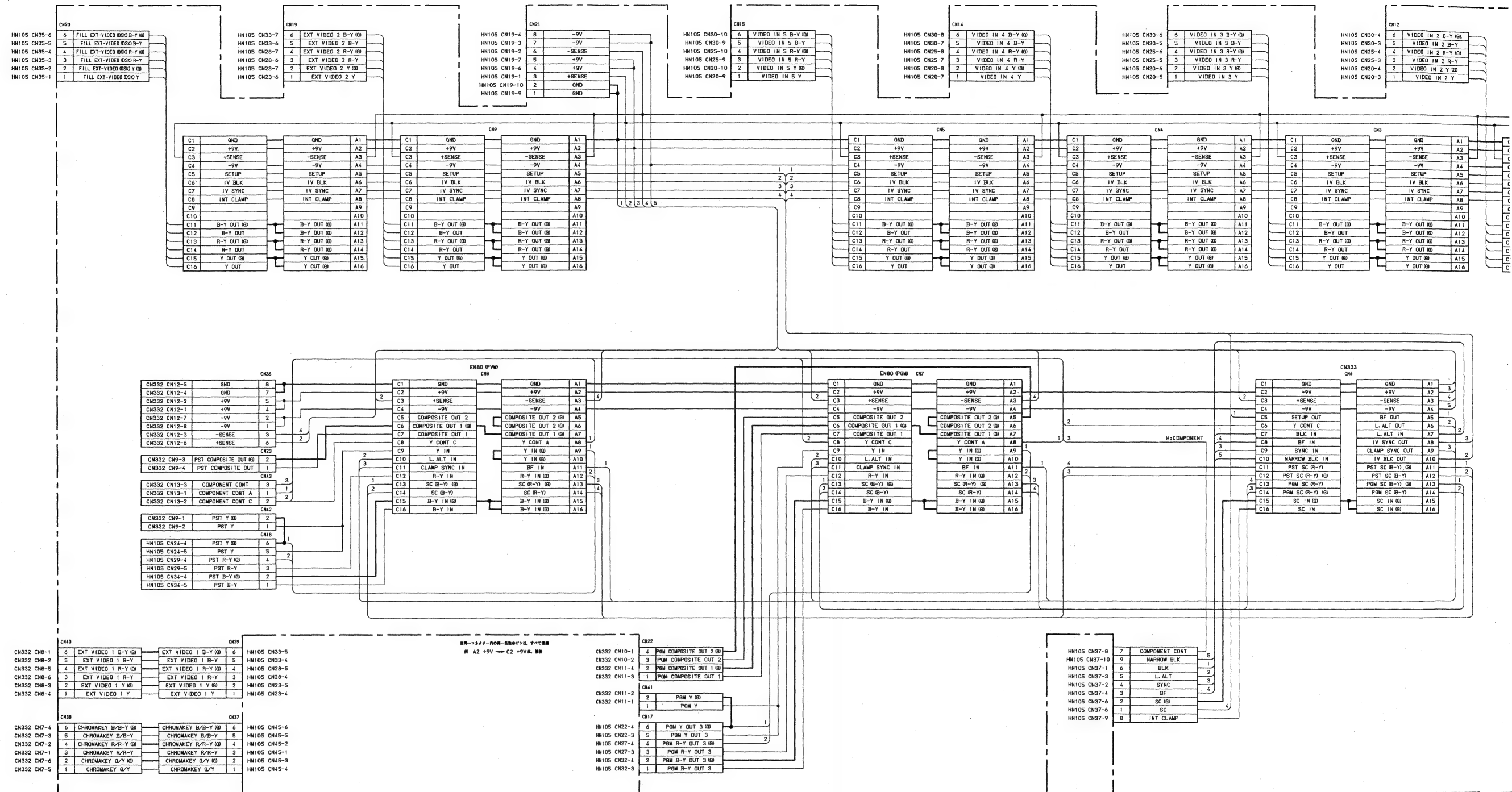


## HN-105 PROCESS

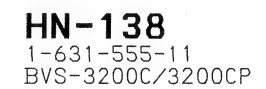


4

## HN-138 MOTHER BOARD



## HN-138 PROCESS



**KY-155/155P CONSOLE**

**1**

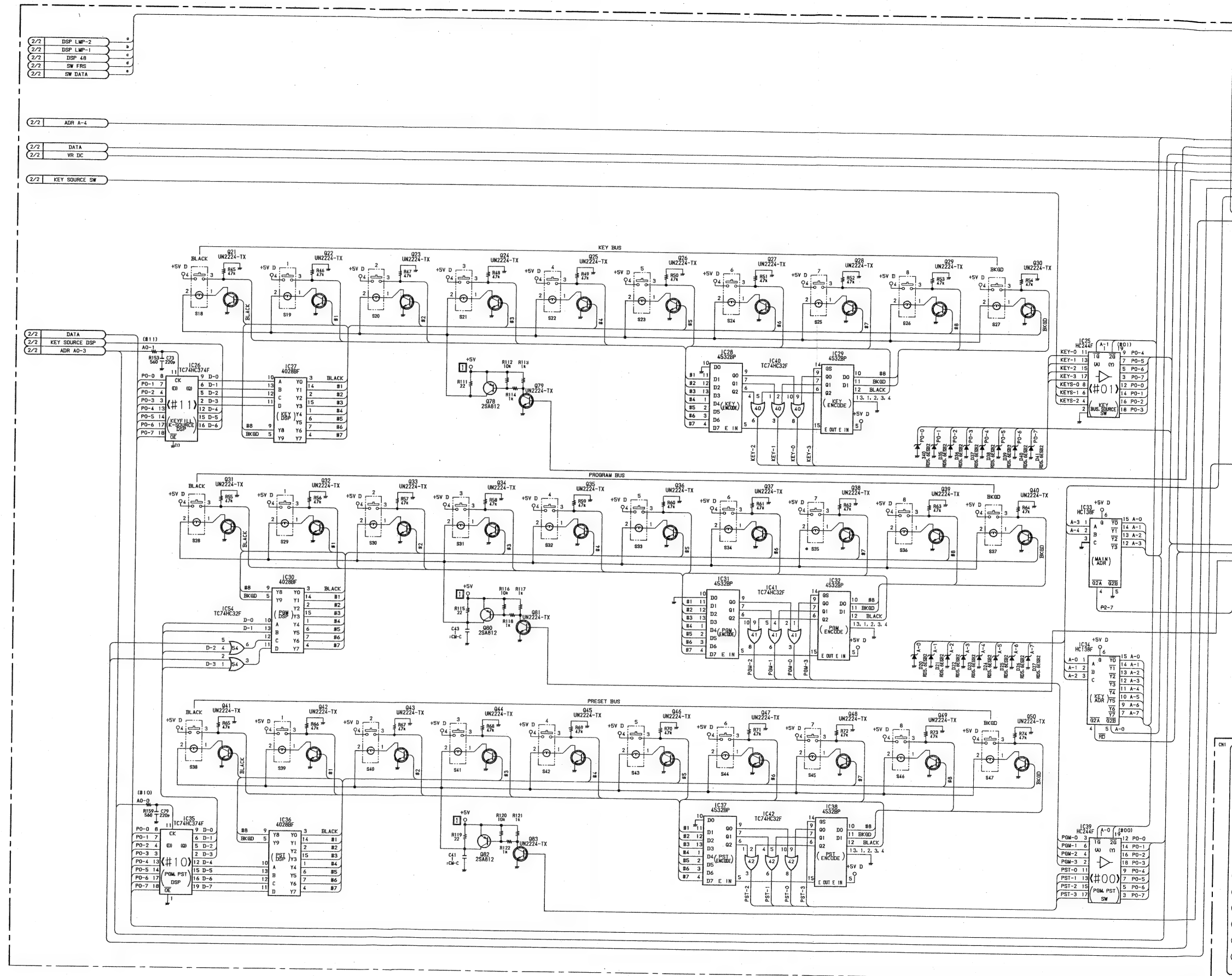
2

3

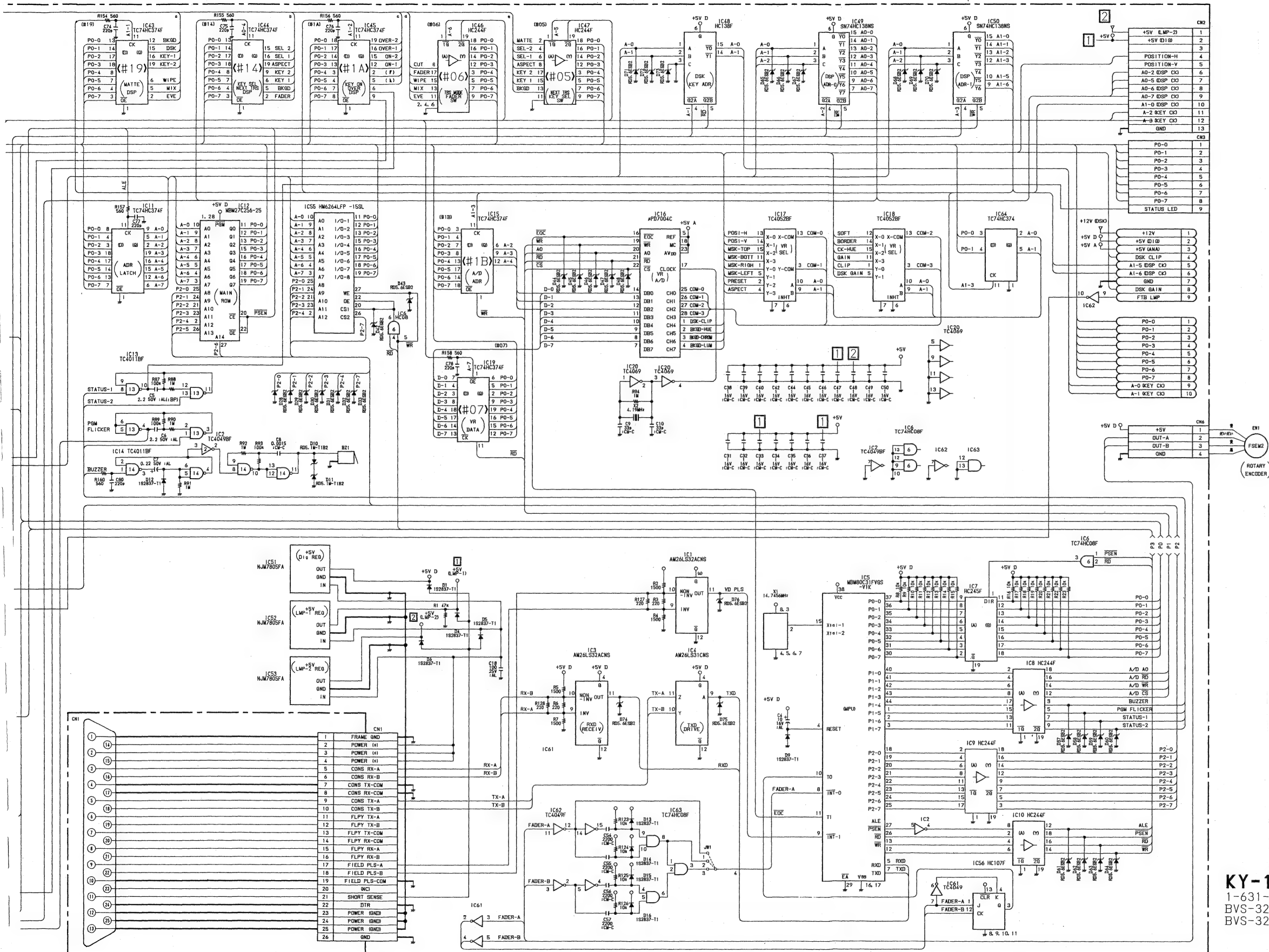
4

5

6







KY-155/155P (1/2)  
1-631-548-11  
BVS-3200/3200P  
BVS-3200C/3200CP

## 1

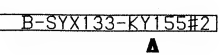
2

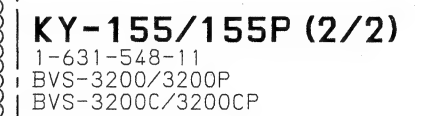
3

4

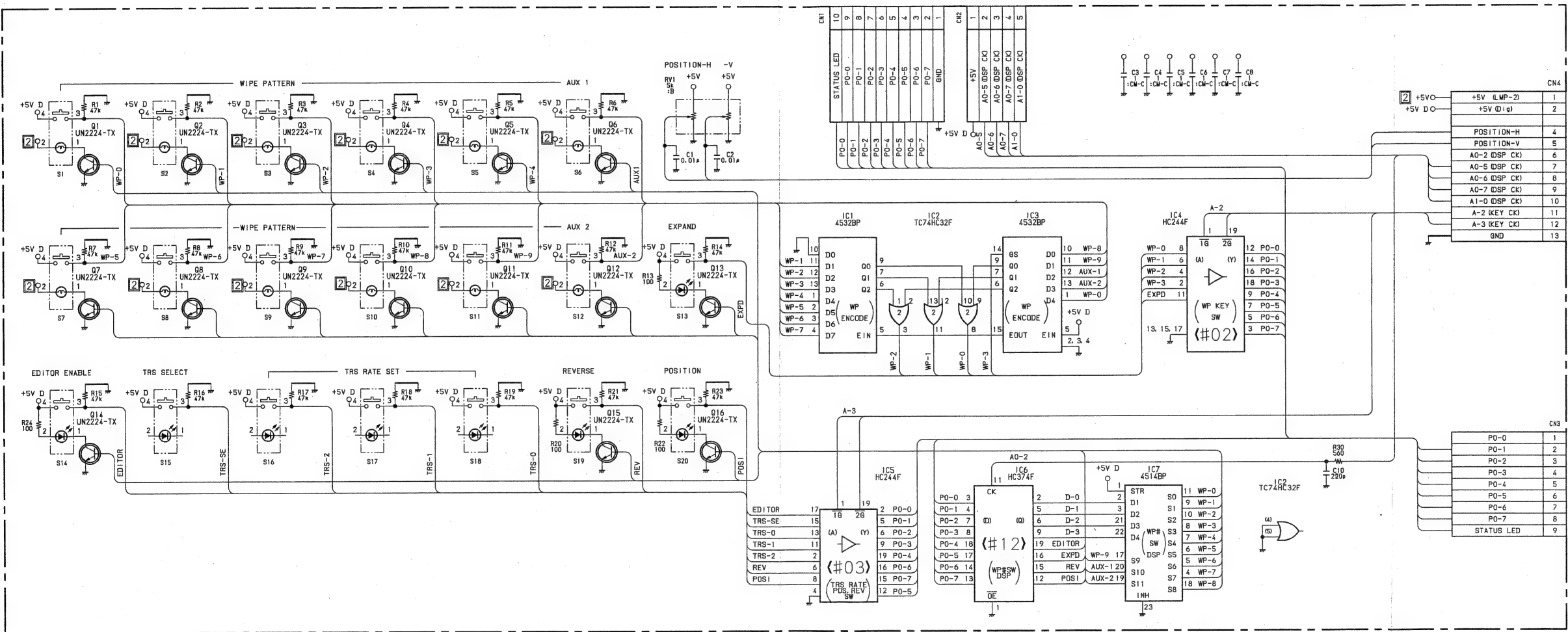
5

6





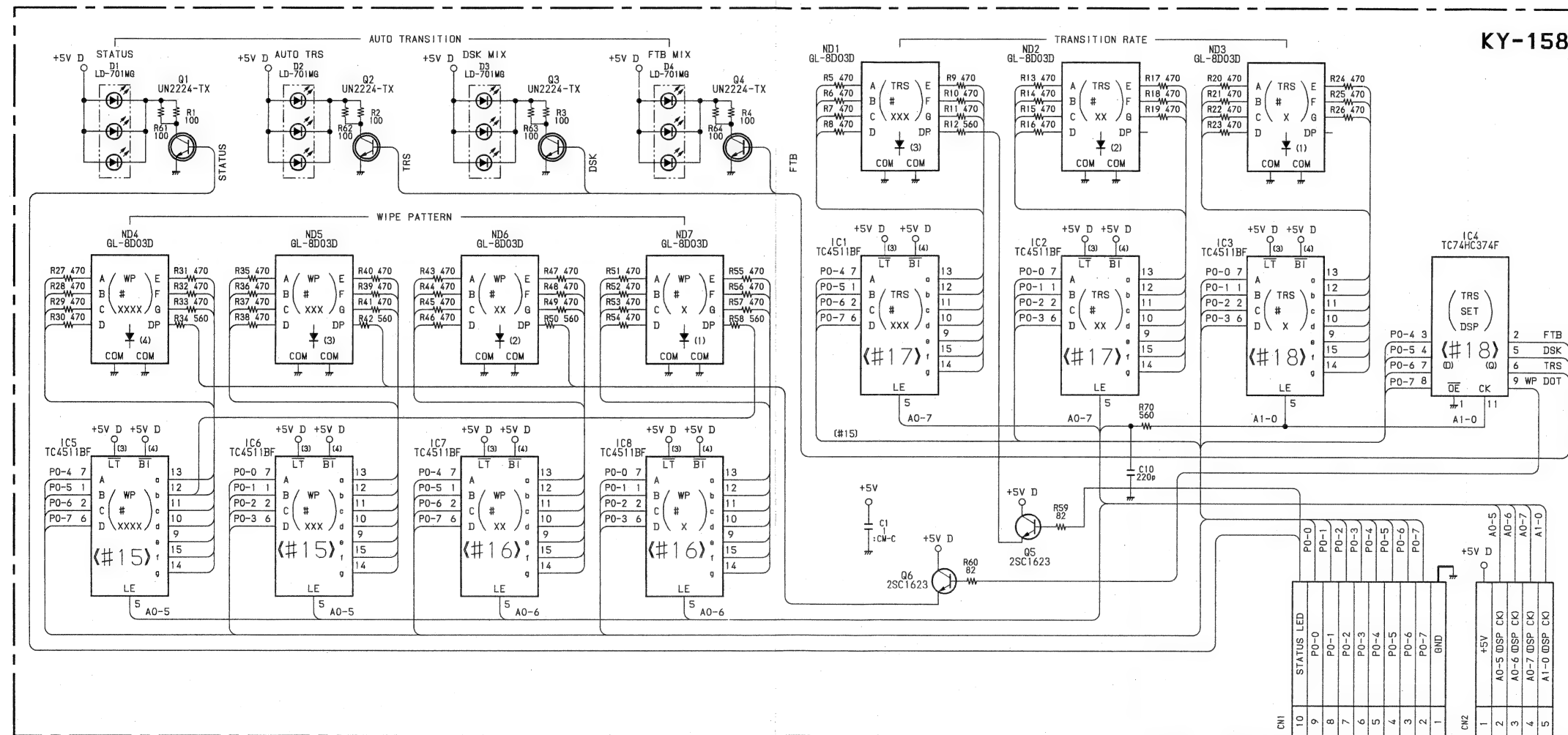
KY-157 SUB SWITCH BOARD



**KY-157**  
1-631-549-11  
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP



KY-158 SUB SWITCH BOARD

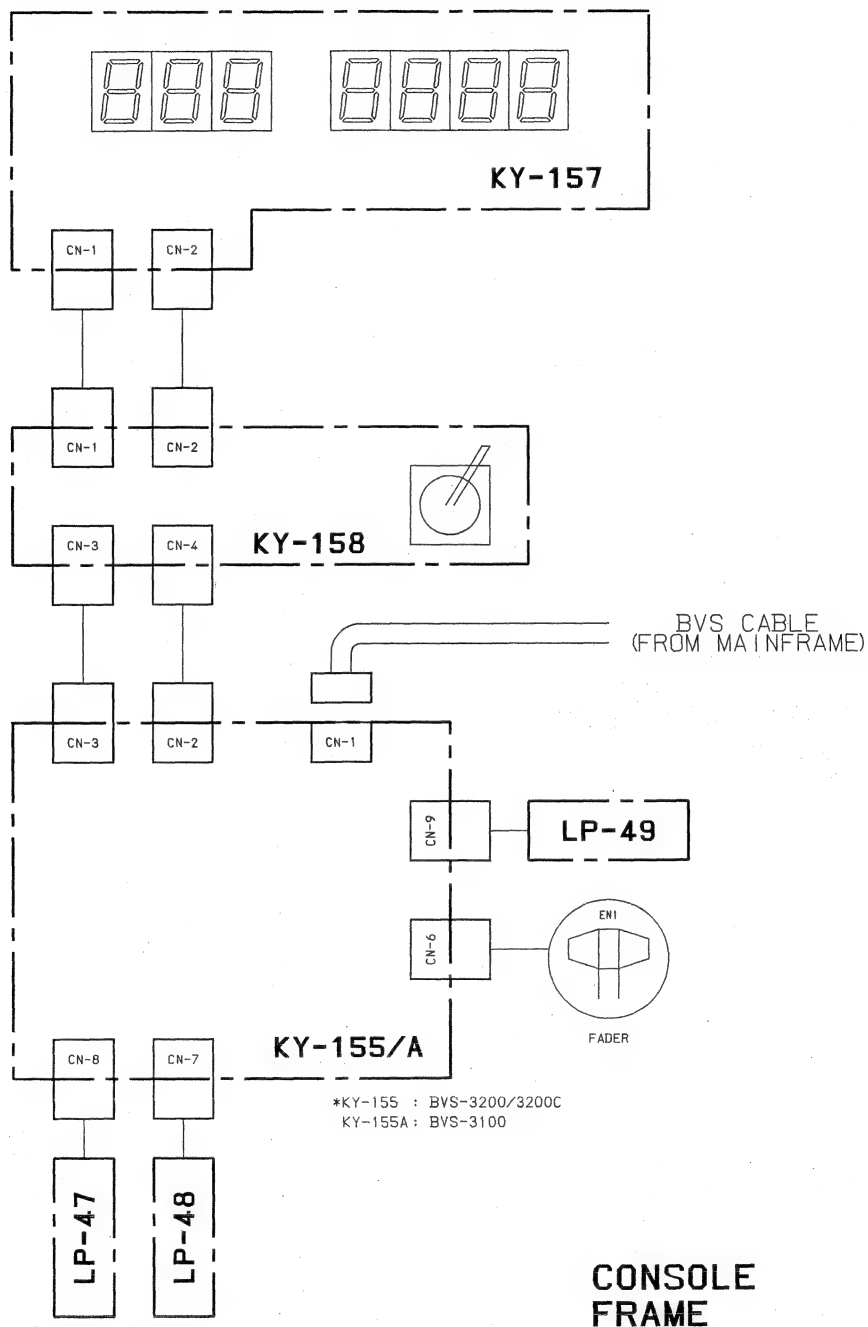


**KY-158**

1-631-550-11  
BVS-3100/3100P  
BVS-3200/3200P  
BVS-3200C/3200CP

# FRAME CONSOLE

## FRAME (CONSOLE)



CONSOLE  
FRAME

# SECTION 8

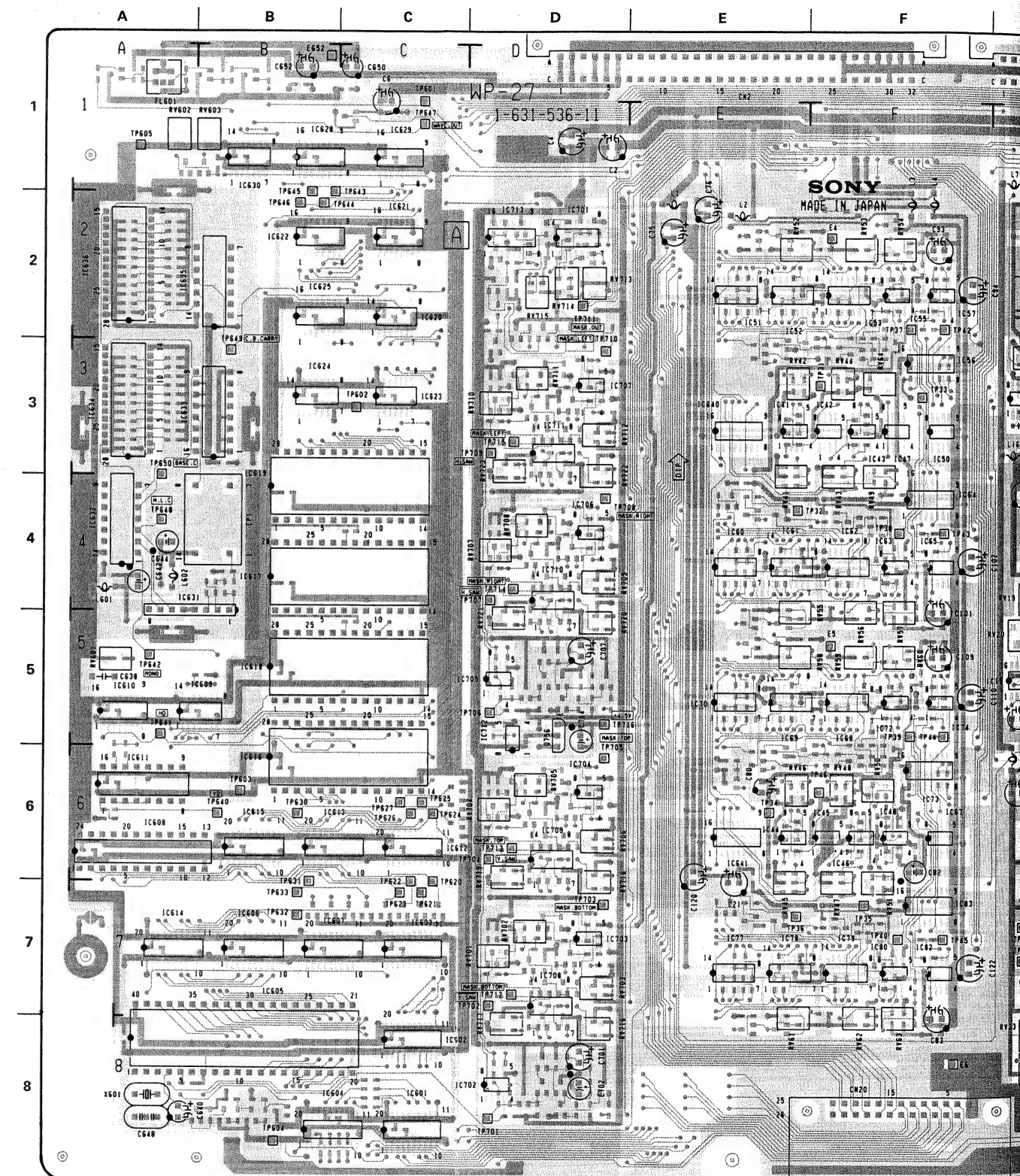
## PRINTED CIRCUIT BOARDS

WP-27/27P (1-631-536-11)

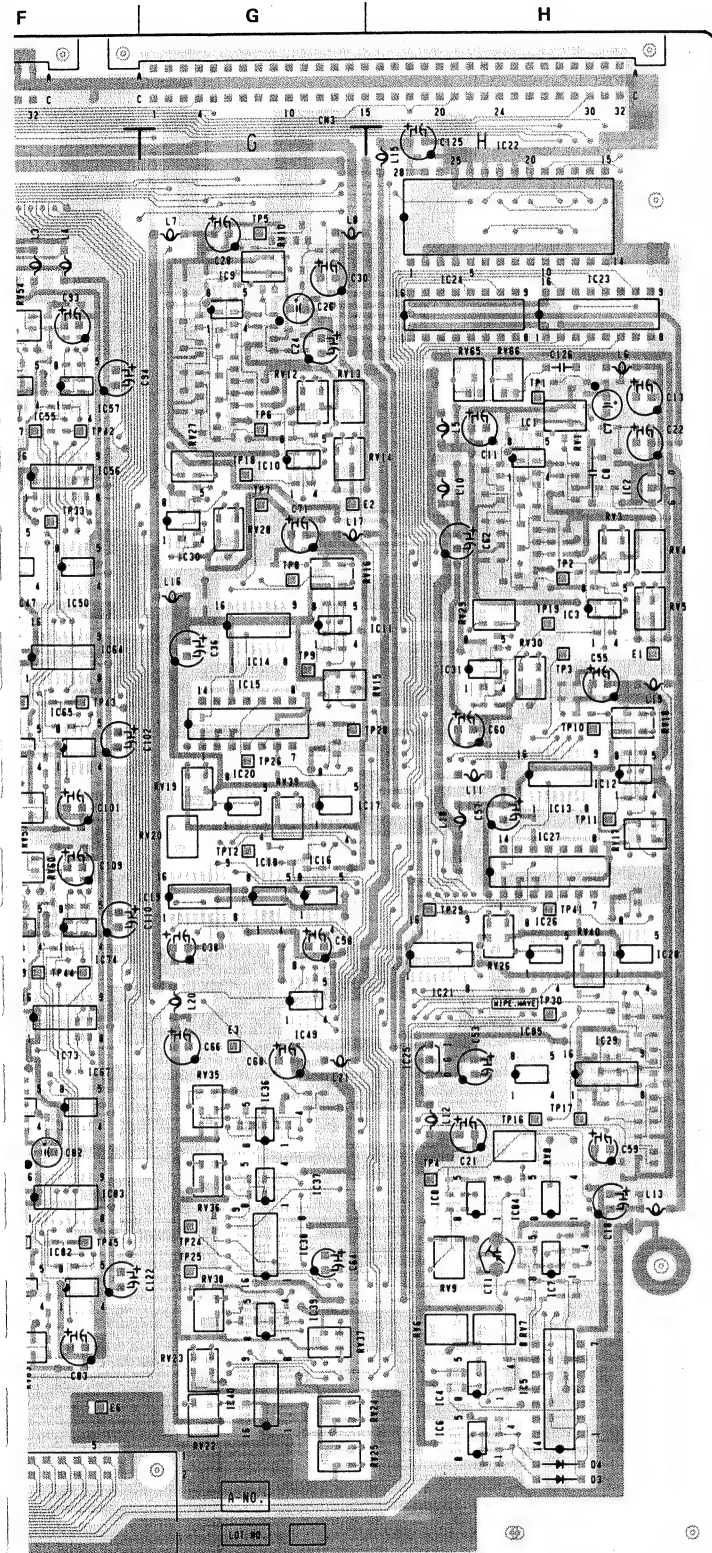
CN3	G - 1	IC42	F - 3	JR607	A - 3 (B)	Q95	G - 4 (B)	RV18	H - 4	TP715	D - 3
CN20	F - 8	IC43	F - 3	JR609	A - 3 (B)	Q96	G - 5 (B)	RV19	G - 4	TP716	D - 5
		IC44	E - 6	JR612	A - 3 (B)	Q97	H - 5 (B)	RV20	G - 5		
CT1	H - 7	IC45	F - 6	JR613	A - 3 (B)	Q98	H - 6 (B)	RV22	G - 8	X601	A - 8
		IC46	F - 6	JR616	A - 3 (B)	Q601	B - 8 (B)	RV23	G - 8	X602	B - 4
D1	H - 2 (B)	IC47	F - 3	JR617	A - 3 (B)	Q602	B - 8 (B)	RV24	G - 8		
D2	H - 2 (B)	IC48	F - 6	JR619	A - 3 (B)	Q603	A - 1 (B)	RV25	G - 8		
D3	H - 8	IC49	G - 6	JR621	A - 2 (B)	Q604	B - 1 (B)	RV26	H - 5		
D4	H - 8	IC50	F - 3	JR623	A - 2 (B)	Q605	B - 1 (B)	RV27	G - 2		
D5	C - 1 (B)	IC51	E - 2	JR626	A - 2 (B)	Q606	E - 6 (B)	RV28	G - 3		
D6	F - 2 (B)	IC52	E - 2	JR627	A - 2 (B)	Q701	D - 8 (B)	RV29	H - 3		
D7	G - 1 (B)	IC53	F - 2	JR630	A - 2 (B)	Q702	D - 8 (B)	RV30	H - 4		
D8	G - 2 (B)	IC55	F - 2	JR631	A - 2 (B)	Q703	D - 8 (B)	RV35	G - 6		
D13	F - 2 (B)	IC56	F - 3	JR634	A - 2 (B)	Q704	D - 8 (B)	RV36	G - 7		
D14	F - 2 (B)	IC57	F - 2			Q705	D - 8 (B)	RV37	G - 7		
D15	E - 4 (B)	IC60	E - 4	Q1	H - 2 (B)	Q706	D - 7 (B)	RV38	G - 7		
D16	F - 6 (B)	IC61	E - 4	Q2	H - 2 (B)	Q707	D - 7 (B)	RV39	G - 4		
D17	E - 7 (B)	IC62	F - 4	Q3	H - 3 (B)	Q708	D - 7 (B)	RV40	H - 5		
D28	F - 2 (B)	IC63	F - 4	Q4	H - 3 (B)	Q709	D - 7 (B)	RV41	E - 4		
D601	C - 6 (B)	IC64	F - 4	Q5	H - 2 (B)	Q710	D - 7 (B)	RV42	E - 3		
D602	C - 6 (B)	IC67	F - 6	Q6	H - 3 (B)	Q711	D - 7 (B)	RV43	F - 4		
D603	D - 6 (B)	IC69	E - 5	Q7	H - 3 (B)	Q712	D - 7 (B)	RV44	F - 3		
D604	C - 6 (B)	IC70	E - 5	Q8	H - 3 (B)	Q713	D - 6 (B)	RV45	E - 7		
D605	C - 7 (B)	IC72	F - 5	Q9	H - 3 (B)	Q714	D - 6 (B)	RV46	E - 6		
D606	C - 7 (B)	IC73	F - 6	Q10	H - 3 (B)	Q715	D - 6 (B)	RV47	F - 7		
D607	C - 7 (B)	IC74	F - 5	Q11	H - 3 (B)	Q716	D - 6 (B)	RV48	F - 6		
D608	C - 7 (B)	IC77	E - 7	Q12	H - 3 (B)	Q717	D - 6 (B)	RV49	F - 4		
D609	B - 8 (B)	IC78	E - 7	Q14	G - 1 (B)	Q718	D - 6 (B)	RV50	F - 6		
D610	B - 8 (B)	IC79	F - 7	Q15	G - 2 (B)	Q719	D - 6 (B)	RV51	F - 7		
D611	C - 7 (B)	IC80	F - 7	Q16	G - 2 (B)	Q720	D - 5 (B)	RV52	E - 2		
D612	C - 7 (B)	IC82	F - 7	Q17	G - 2 (B)	Q721	D - 5 (B)	RV53	F - 2		
D613	C - 7 (B)	IC83	F - 7	Q18	G - 2 (B)	Q722	D - 5 (B)	RV54	F - 2		
D614	B - 7 (B)	IC84	H - 7	Q19	G - 2 (B)	Q723	D - 5 (B)	RV55	F - 5		
D615	A - 1 (B)	IC85	H - 6	Q20	G - 2 (B)	Q724	D - 5 (B)	RV56	F - 5		
D616	B - 1 (B)	IC86	C - 8	Q21	G - 2 (B)	Q725	D - 4 (B)	RV57	F - 5		
D701	D - 8 (B)	IC87	C - 8	Q22	G - 2 (B)	Q726	D - 4 (B)	RV58	F - 5		
D702	D - 7 (B)	IC88	C - 7	Q23	G - 2 (B)	Q727	D - 4 (B)	RV59	F - 5		
D703	D - 6 (B)	IC89	B - 8	Q24	G - 2 (B)	Q728	D - 4 (B)	RV60	F - 5		
D704	D - 5 (B)	IC90	B - 8	Q25	G - 2 (B)	Q729	D - 4 (B)	RV61	E - 8		
D705	D - 4 (B)	IC91	B - 7	Q35	H - 6 (B)	Q730	D - 4 (B)	RV62	F - 8		
D706	D - 3 (B)	IC92	B - 7	Q36	H - 6 (B)	Q731	D - 4 (B)	RV63	F - 8		
D707	D - 2 (B)	IC93	A - 6	Q37	H - 6 (B)	Q732	D - 3 (B)	RV64	F - 3		
D708	D - 2 (B)	IC94	B - 5	Q38	H - 6 (B)	Q733	D - 3 (B)	RV65	H - 2		
D709	D - 3 (B)	IC95	A - 5	Q39	H - 6 (B)	Q734	D - 3 (B)	RV66	H - 2		
		IC96	A - 5	Q40	G - 3 (B)	Q735	D - 3 (B)	RV601	A - 5		
FL601	A - 1	IC97	B - 6	Q41	G - 3 (B)	Q736	D - 3 (B)	RV602	A - 1		
		IC98	B - 6	Q42	H - 4 (B)	Q737	D - 3 (B)	RV603	B - 1		
IC1	H - 2	IC99	B - 6	Q43	H - 4 (B)	Q738	D - 3 (B)	RV701	D - 7		
IC2	H - 3	IC100	B - 6	Q56	G - 6 (B)	Q739	D - 3 (B)	RV702	D - 7		
IC3	H - 3	IC101	B - 4	Q57	G - 6 (B)	Q740	D - 3 (B)	RV703	D - 7		
IC4	H - 8	IC102	C - 2	Q60	E - 3 (B)	Q741	D - 2 (B)	RV704	D - 6		
IC5	H - 8	IC103	C - 2	Q61	F - 3 (B)	Q742	D - 2 (B)	RV705	D - 6		
IC6	H - 8	IC104	C - 2	Q62	F - 6 (B)	Q743	D - 2 (B)	RV706	D - 6		
IC7	H - 7	IC105	C - 3	Q63	F - 6 (B)	Q744	D - 2 (B)	RV707	D - 4		
IC8	H - 7	IC106	B - 3	Q64	F - 6 (B)	Q745	D - 2 (B)	RV708	D - 4		
IC9	G - 4	IC107	B - 2	Q65	F - 6 (B)	Q746	D - 2 (B)	RV709	D - 4		
IC10	G - 3	IC108	B - 1	Q66	E - 2 (B)	Q747	D - 2 (B)	RV710	D - 3		
IC11	H - 4	IC109	C - 1	Q67	E - 2 (B)	Q748	D - 8 (B)	RV711	D - 3		
IC12	H - 4	IC110	B - 1	Q68	E - 3 (B)	Q749	D - 8 (B)	RV712	D - 3		
IC13	H - 5	IC111	A - 4	Q69	F - 2 (B)	Q750	D - 6 (B)	RV713	D - 2		
IC14	G - 4	IC112	A - 4	Q70	F - 3 (B)	Q751	D - 6 (B)	RV714	D - 2		
IC15	G - 4	IC113	A - 3	Q71	F - 2 (B)	Q752	D - 5 (B)	RV715	D - 2		
IC16	G - 5	IC114	A - 3	Q72	E - 4 (B)	Q753	D - 4 (B)	RV716	D - 8		
IC17	G - 5	IC115	A - 2	Q73	E - 5 (B)	Q754	D - 3 (B)	RV717	D - 8		
IC18	G - 5	IC116	A - 2	Q74	E - 5 (B)	Q755	D - 3 (B)	RV718	D - 6		
IC19	G - 5	IC117	E - 3	Q75	E - 4 (B)	Q756	D - 5	RV719	D - 6		
IC20	G - 4	IC118	E - 6	Q76	F - 4 (B)	Q757	D - 3 (B)	RV720	D - 5		
IC21	H - 6	IC119	D - 2	Q77	F - 4 (B)	Q758	D - 2 (B)	RV721	D - 5		
IC22	H - 1	IC120	D - 8	Q78	F - 4 (B)			RV722	D - 3		
IC23	H - 2	IC121	D - 7	Q79	E - 5 (B)	RV1	H - 2	RV723	D - 3		
IC24	H - 2	IC122	D - 6	Q80	E - 5 (B)	RV3	H - 3				
IC25	H - 6	IC123	D - 5	Q81	E - 5 (B)	RV4	H - 3	TPE1	H - 4		
IC26	H - 5	IC124	D - 4	Q82	E - 6 (B)	RV5	H - 3	TPE2	G - 3		
IC27	H - 5	IC125	D - 3	Q83	F - 5 (B)	RV6	H - 7	TPE3	G - 3		
IC28	H - 5	IC126	D - 7	Q84	F - 6 (B)	RV7	H - 7				
IC29	H - 6	IC127	D - 6	Q85	F - 5 (B)	RV8	H - 6	TP706	D - 5		
IC30	G - 3	IC128	D - 4	Q86	E - 7 (B)	RV9	H - 7	TP707	D - 4		
IC31	H - 4	IC129	D - 3	Q87	E - 8 (B)	RV10	G - 1	TP708	D - 4		
IC36	G - 6	IC130	D - 5	Q88	E - 8 (B)	RV12	G - 2	TP709	D - 3		
IC37	G - 7	IC131	D - 2	Q89	E - 7 (B)	RV13	G - 2	TP710	D - 3		
IC38	G - 7			Q90	F - 7 (B)	RV14	H - 3	TP711	D - 2		
IC39	G - 7	JR601	A - 3 (B)	Q91	F - 7 (B)	RV15	H - 4	TP712	D - 7		
IC40	G - 8	JR604	A - 3 (B)	Q92	F - 7 (B)	RV16	G - 3	TP713	D - 6		
IC41	F - 3	JR606	A - 3 (B)	Q93	E - 2 (B)	RV17	H - 5	TP714	D - 4		

NOTE  
 \*- : \*- A SIDE  
 \*- (B); \*- B SIDE

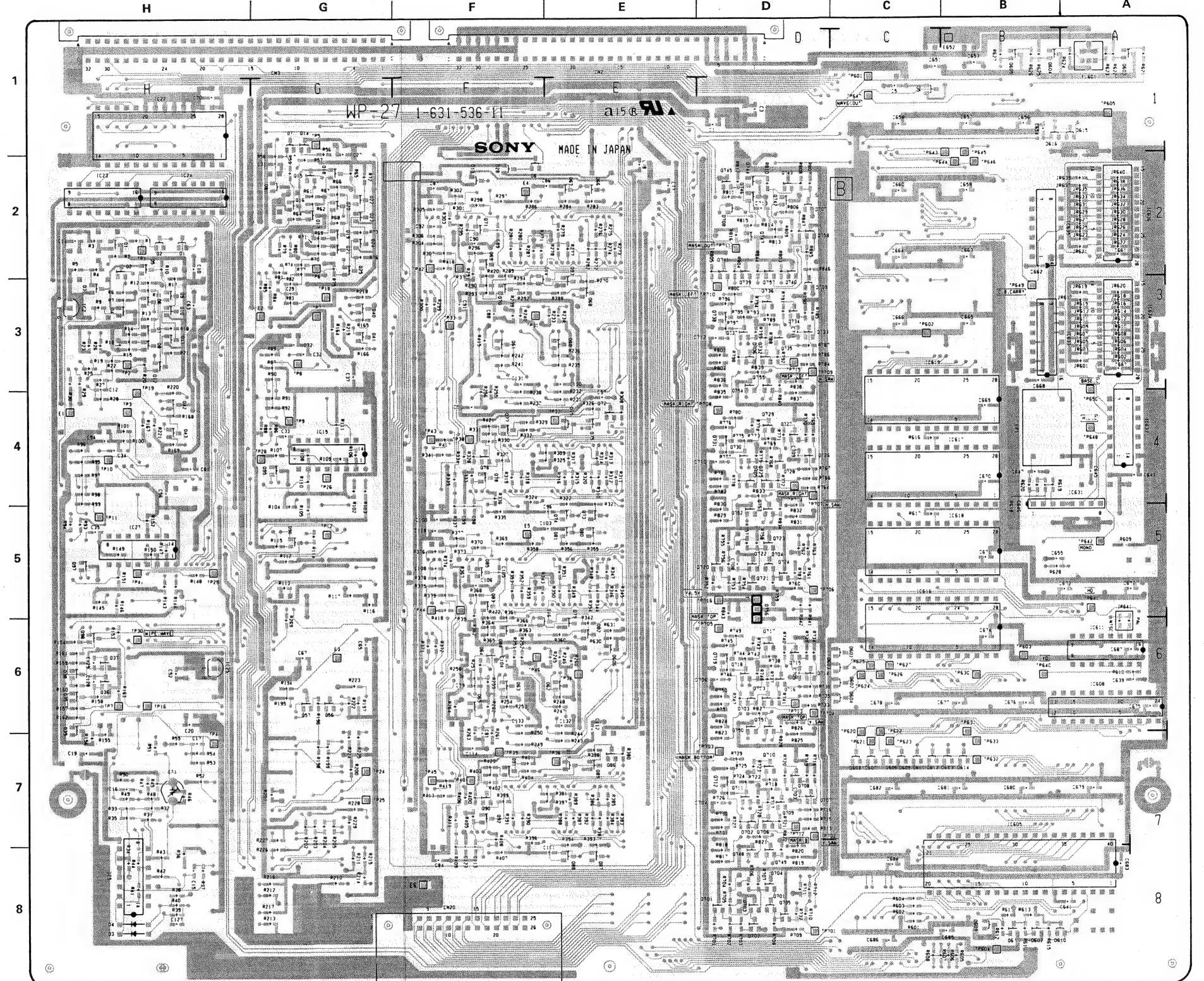
## WP-27/27P; WIPE SIGNAL GENERATOR







WP-27 -A SIDE-  
1-631-536-11 (1)  
BVS-3100/3200/3200C-----WP-27  
BVS-3100P/3200P/3200CP----WP-27P



WP-27 -B SIDE-  
1-631-536-11 (1)  
BVS-3100/3200/3200C-----WP-27  
BVS-3100P/3200P/3200CP----WP-27P



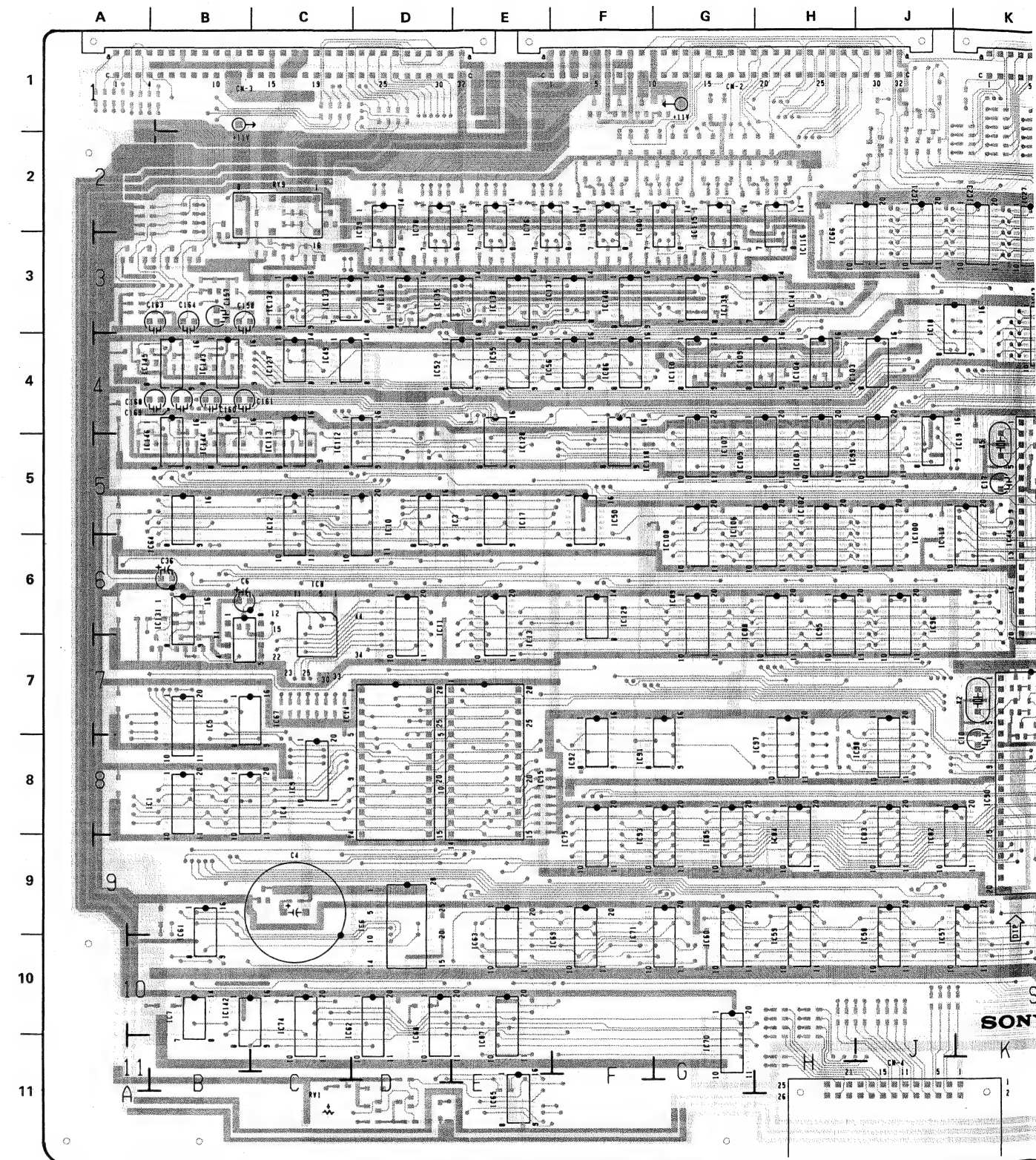
## SY-138/138P; SYSTEM CONTROL

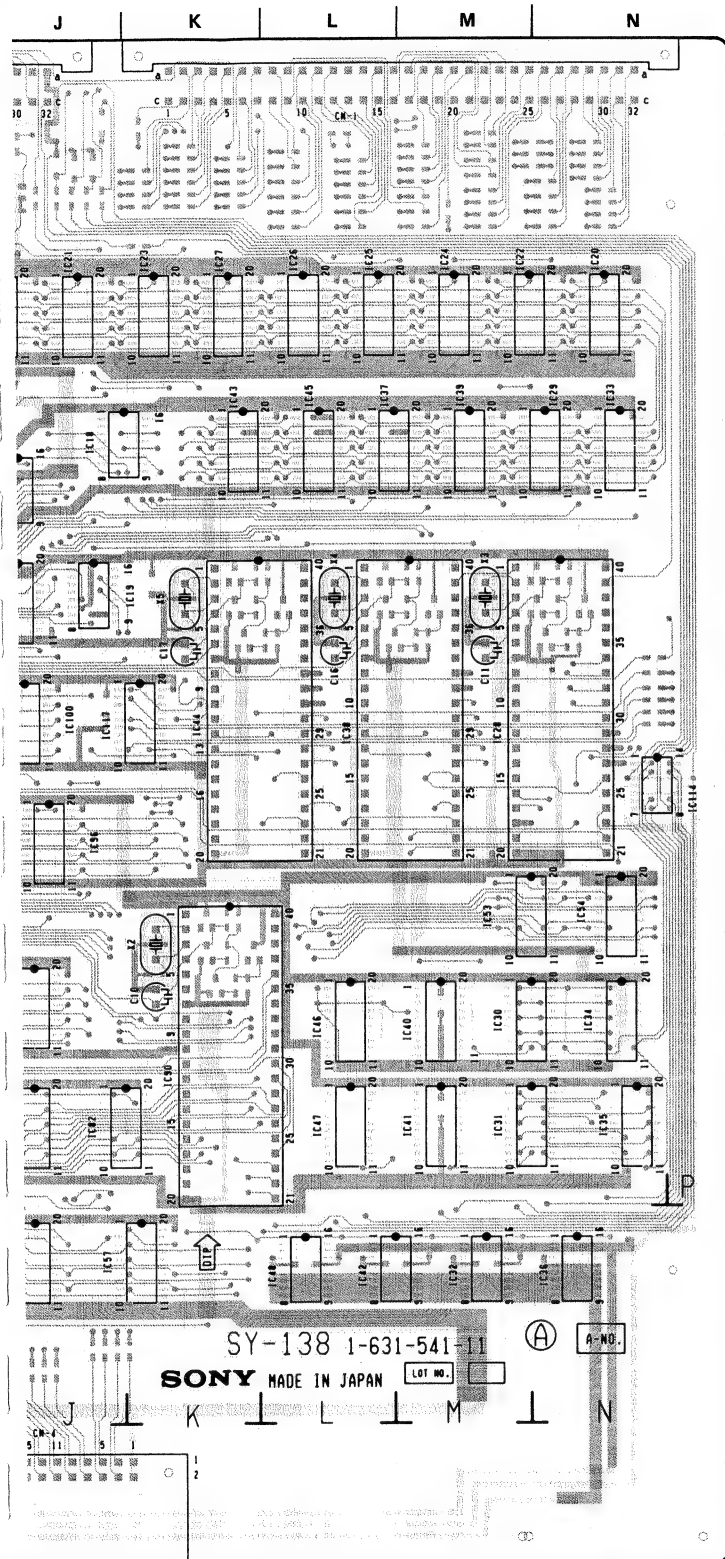
SY-138/138P (1-631-541-11)

CNI14	C-8	IC50	F-5
CNI15	E-7	IC52	D-4
CNI28	M-5	IC53	M-7
CNI38	L-5	IC54	N-7
CNI44	K-6	IC55	E-4
CNI90	K-8	IC56	E-4
CN1	L-1	IC57	J-10
CN2	G-1	IC58	J-10
CN3	C-1	IC59	H-10
CN4	J-11	IC60	G-10
		IC61	B-9
D1	C-2 (B)	IC62	D-10
D5	C-9 (B)	IC63	E-10
D6	B-6 (B)	IC64	B-6
D7	K-7 (B)	IC65	E-11
D8	K-7 (B)	IC66	H-3
D9	N-4 (B)	IC67	C-7
D10	N-4 (B)	IC68	D-10
D11	M-4 (B)	IC69	F-10
D12	L-4 (B)	IC70	G-11
D13	L-5 (B)	IC71	F-10
D14	K-4 (B)	IC74	C-10
D15	A-7 (B)	IC75	F-9
D16	B-2 (B)	IC76	E-2
D17	F-1 (B)	IC77	E-2
D18	F-1 (B)	IC78	D-2
D19	F-1 (B)	IC79	D-2
D20	F-1 (B)	IC80	F-2
D21	B-4 (B)	IC81	F-2
D22	B-3 (B)	IC82	J-9
D23	B-5 (B)	IC83	J-9
D24	C-5 (B)	IC84	H-9
D25	A-4 (B)	IC85	G-9
D26	B-3 (B)	IC86	F-4
D27	A-5 (B)	IC87	E-10
D28	B-5 (B)	IC88	G-6
		IC89	G-6
IC1	B-8	IC90	K-8
IC3	E-5	IC91	F-8
IC4	C-8	IC92	F-8
IC5	B-7	IC93	F-9
IC6	D-9	IC95	H-6
IC7	B-10	IC96	J-6
IC8	C-6	IC97	H-8
IC9	C-8	IC98	J-8
IC10	D-5	IC99	H-5
IC11	D-6	IC100	J-6
IC12	C-5	IC101	H-5
IC13	E-6	IC102	H-5
IC14	C-7	IC103	H-4
IC15	E-8	IC104	H-4
IC17	E-5	IC105	G-5
IC18	J-3	IC106	G-5
IC19	K-5	IC107	G-5
IC20	N-2	IC108	G-4
IC21	J-2	IC109	G-4
IC22	M-2	IC110	G-4
IC23	K-2	IC112	C-5
IC24	M-2	IC113	C-5
IC25	L-2	IC114	N-6
IC26	L-2	IC115	G-2
IC27	K-2	IC116	H-3
IC28	M-6	IC117	J-6
IC29	N-3	IC118	F-5
IC30	M-8	IC127	C-4
IC31	M-8	IC128	E-5
IC32	M-10	IC129	F-6
IC33	N-3	IC131	B-6
IC34	N-8	IC133	C-3
IC35	N-9	IC134	C-3
IC36	N-10	IC135	D-3
IC37	L-3	IC136	D-3
IC38	L-6	IC137	E-3
IC39	M-3	IC138	E-3
IC40	M-8	IC139	G-3
IC41	M-9	IC140	F-3
IC42	L-10	IC141	H-3
IC43	K-3	IC142	B-10
IC44	K-6	IC143	B-4
IC45	L-3	IC144	B-5
IC46	L-8	IC145	A-4
IC47	L-9	IC146	A-5
IC48	L-10		
IC49	C-4		

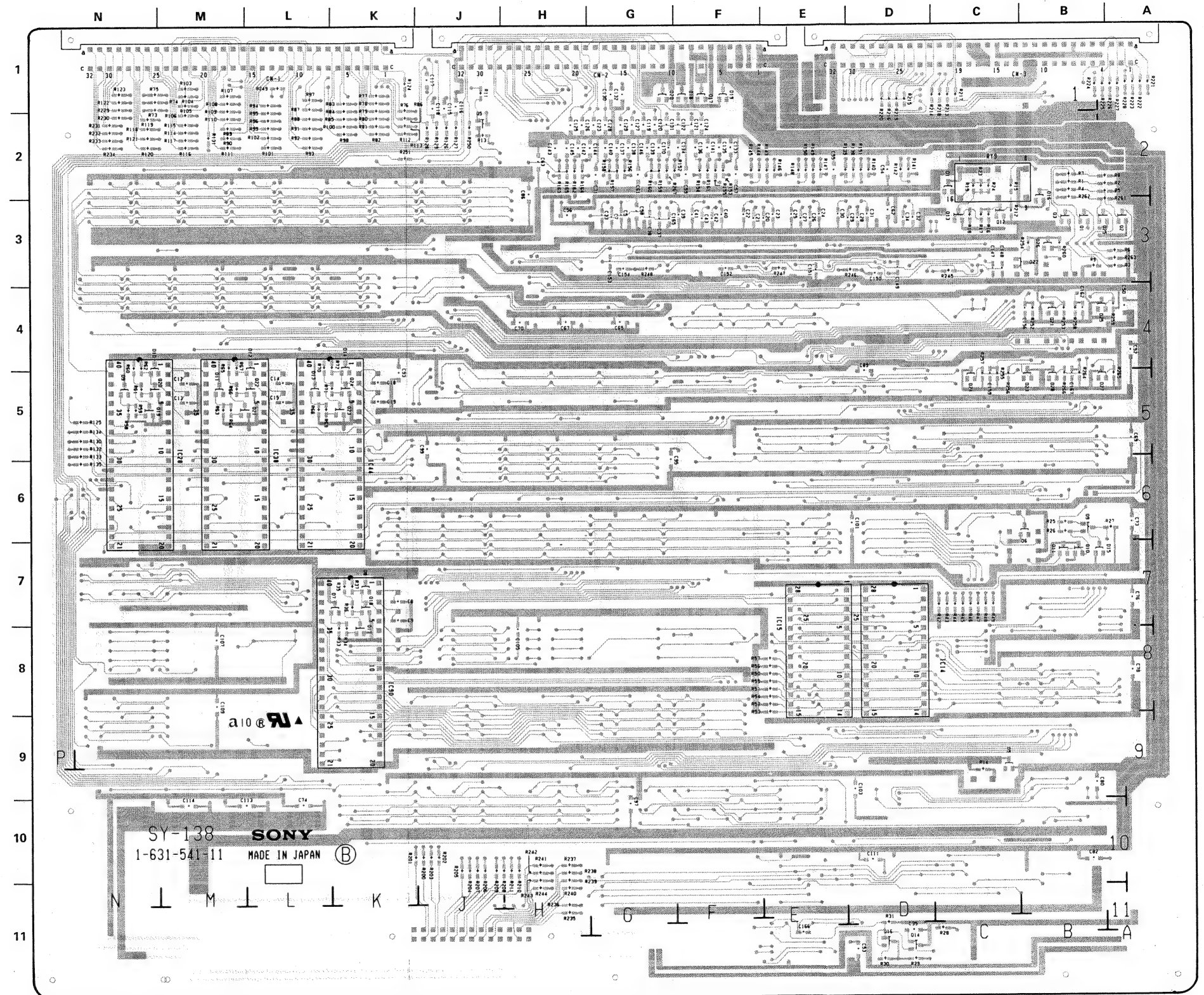
Q1	B-3 (B)
Q2	A-3 (B)
Q3	B-3 (B)
Q9	B-6 (B)
Q10	B-7 (B)
Q11	B-7 (B)
Q12	C-3 (B)
Q13	C-3 (B)
Q14	D-11 (B)
Q15	J-1 (B)
Q16	D-11 (B)
Q17	K-7 (B)
Q18	K-7 (B)
Q19	M-5 (B)
Q20	M-5 (B)
Q21	L-5 (B)
Q22	L-5 (B)
Q23	K-5 (B)
Q24	K-5 (B)
Q25	A-3 (B)
RV1	C-11
RY9	C-2
X1	B-7
X2	K-7
X3	M-4
X4	L-4
X5	K-5

NOTE  
 \* - \* : \*\*A SIDE  
 \* - \* (B) : \*\*B SIDE





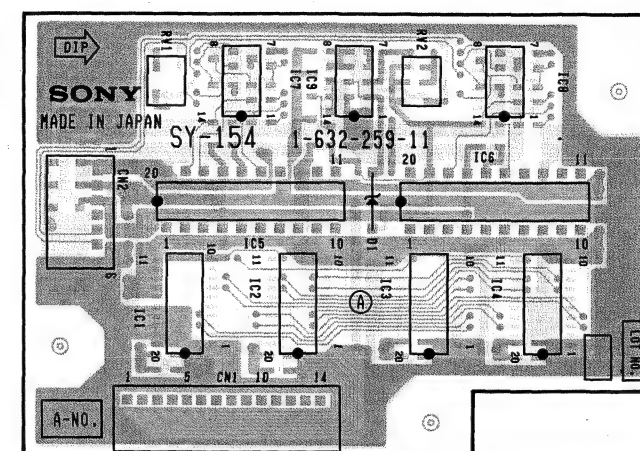
**SY-138 -A SIDE-**  
 1-631-541-11 (1)  
 BVS-3100/3200/3200C-----SY-138  
 BVS-3100P/3200P/3200CP----SY-138P



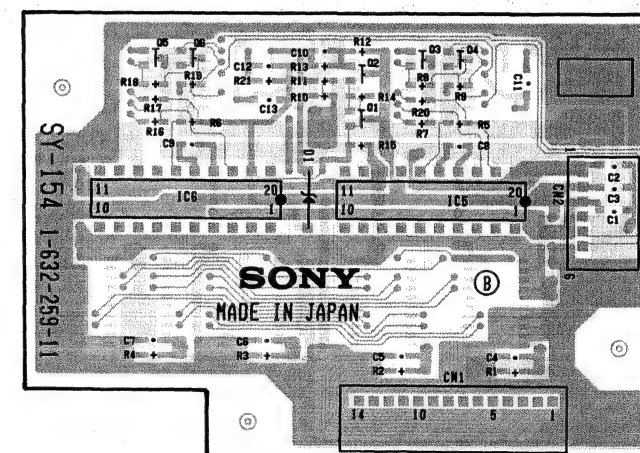
**SY-138 -B SIDE-**  
 1-631-541-11 (1)  
 BVS-3100/3200/3200C-----SY-138  
 BVS-3100P/3200P/3200CP----SY-138P



SY-154; 12BIT DA CHANGER



**SY-154 -A SIDE-**  
1-622-259-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



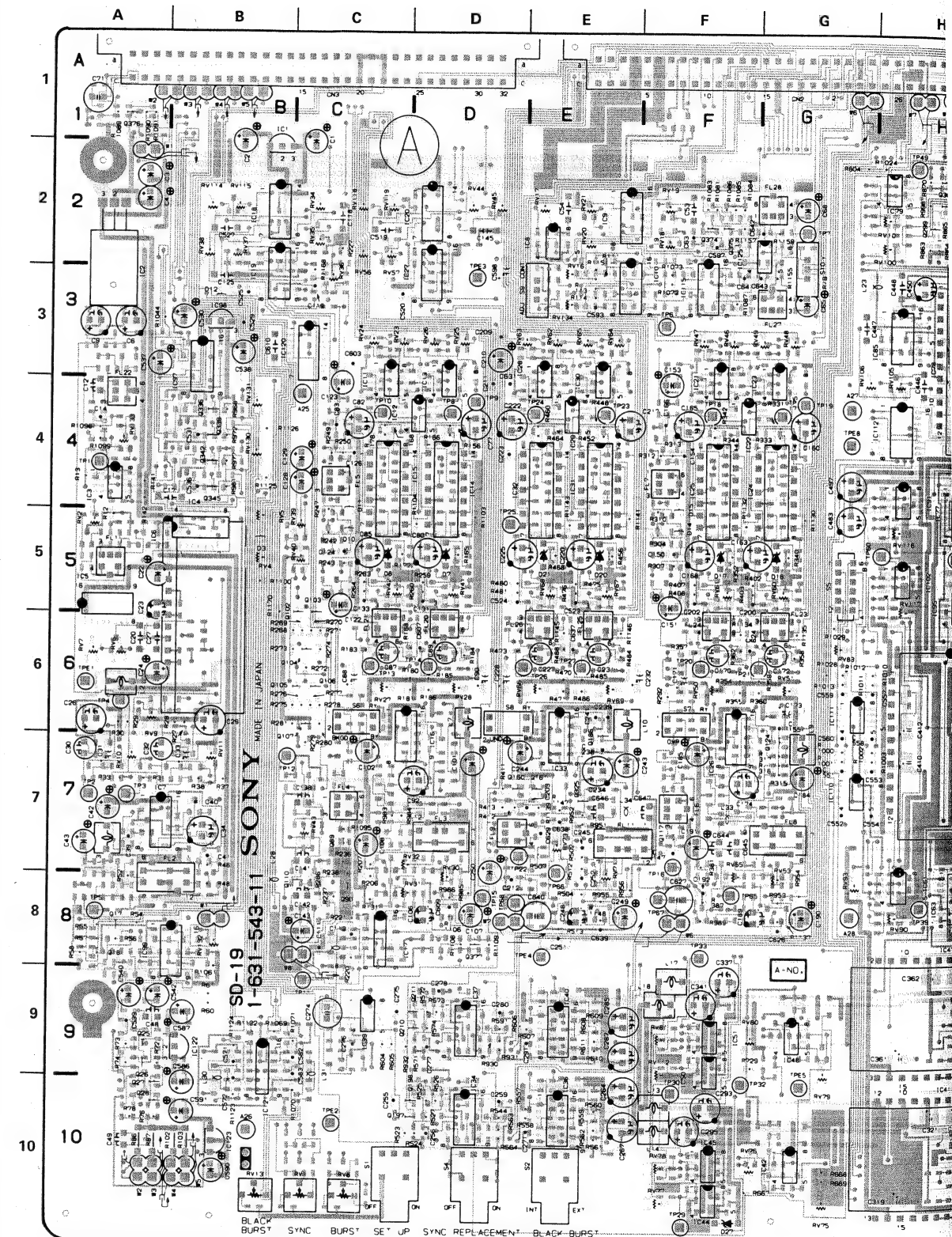
**SY-154 -B SIDE-**  
1-622-259-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP

## SD-19/19P; SIGNAL GENERATOR FOR SIGNAL PROCESSOR

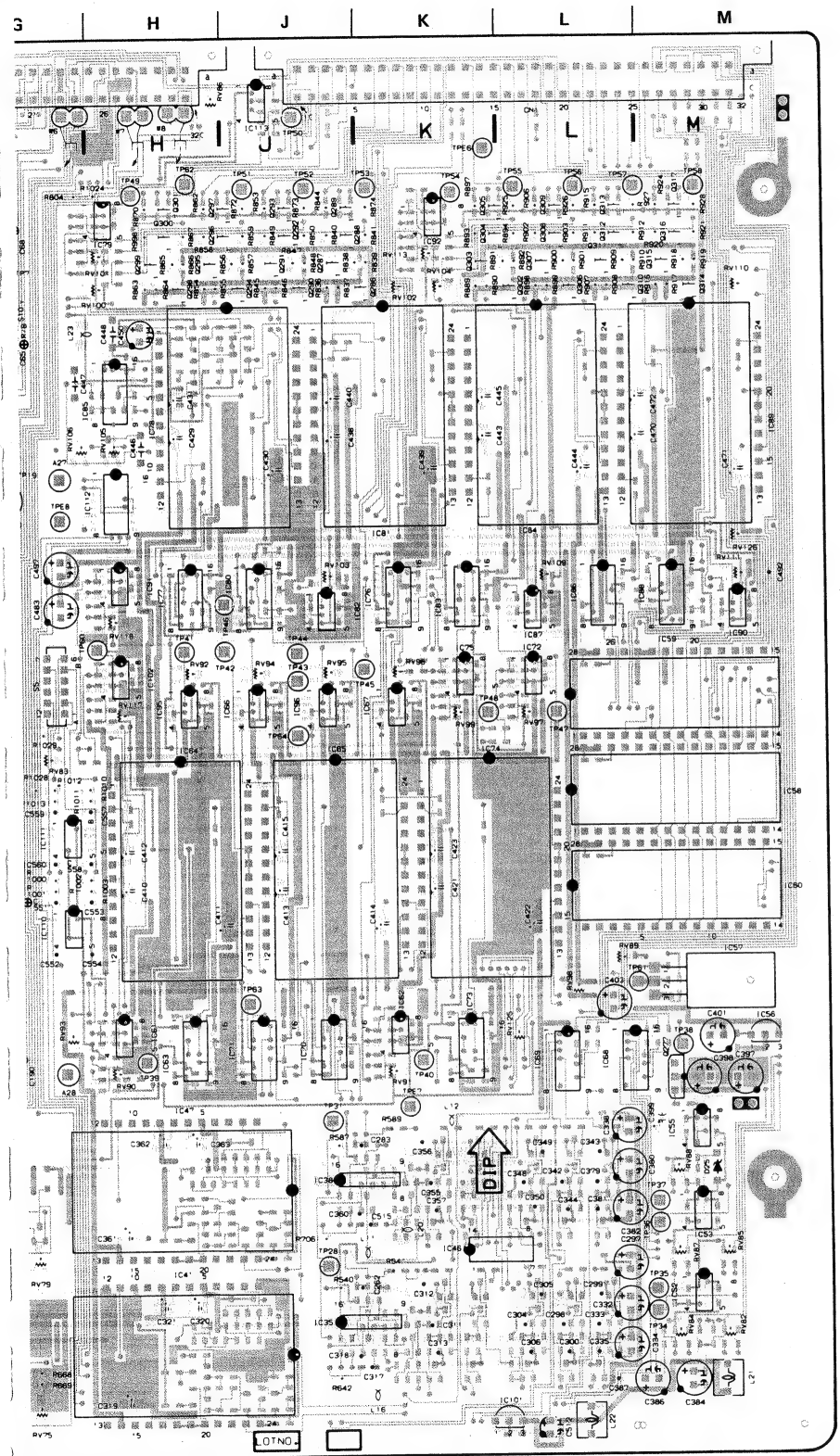
SD-19/19P (1-631-543-11)

CN1	L - 1	IC33	E - 7	Q7	B - 6 (B)	Q103	C - 5	Q203	D - 10 (B)	Q294	J - 2	RV17	E - 2	RV114	B - 2
CN2	G - 1	IC34	D - 10	Q8	A - 7 (B)	Q104	B - 6	Q205	E - 10 (B)	Q295	H - 2	RV18	F - 2	RV115	B - 2
CN3	C - 1	IC35	J - 10	Q9	A - 7 (B)	Q105	B - 6	Q206	E - 10 (B)	Q296	H - 2	RV19	F - 2	RV116	H - 5
		IC36	E - 10	Q10	B - 7 (B)	Q106	C - 6	Q207	E - 10 (B)	Q297	H - 2	RV20	E - 2	RV117	H - 5
D1	F - 1 (B)	IC37	D - 9	Q11	B - 7 (B)	Q107	B - 7	Q208	E - 10 (B)	Q298	H - 2	RV21	E - 2	RV118	C - 2
D2	F - 1 (B)	IC38	J - 9	Q12	A - 7 (B)	Q108	C - 7 (B)	Q209	C - 9 (B)	Q299	H - 2	RV22	E - 2	RV119	C - 2
D3	B - 5	IC39	C - 9	Q13	B - 7 (B)	Q109	C - 7 (B)	Q210	C - 9	Q300	H - 2	RV23	C - 3	RV120	L - 8
D4	A - 6 (B)	IC40	E - 9	Q14	B - 8 (B)	Q110	B - 8	Q211	D - 9	Q301	H - 2	RV24	C - 3	RV121	B - 4
D5	F - 2 (B)	IC41	H - 10	Q15	B - 7 (B)	Q111	C - 8 (B)	Q212	D - 9 (B)	Q302	L - 2	RV25	D - 3	RV122	B - 4
D6	E - 2 (B)	IC42	G - 10	Q16	A - 8 (B)	Q113	F - 6 (B)	Q213	D - 9 (B)	Q303	K - 2	RV26	D - 3	RV123	B - 4
D7	D - 5	IC44	F - 10	Q17	A - 8	Q114	F - 6 (B)	Q214	D - 9 (B)	Q304	K - 2	RV27	C - 6	RV124	B - 4
D8	C - 5	IC45	F - 10	Q18	A - 8	Q115	F - 7 (B)	Q215	D - 9 (B)	Q305	K - 2	RV28	D - 6	RV125	B - 8
D9	C - 2 (B)	IC46	K - 9	Q19	A - 8 (B)	Q116	F - 7 (B)	Q216	D - 9 (B)	Q306	L - 2	RV29	D - 7	RV126	A - 4
D10	C - 5	IC47	H - 8	Q20	A - 8 (B)	Q117	F - 7	Q217	E - 9 (B)	Q307	L - 2	RV30	D - 8	RV127	E - 3
D11	C - 4	IC48	G - 9	Q21	A - 9 (B)	Q119	F - 5 (B)	Q218	E - 9 (B)	Q308	L - 2	RV31	D - 8	RV128	E - 3
D12	B - 3	IC50	F - 9	Q22	B - 8 (B)	Q120	F - 5 (B)	Q219	E - 9 (B)	Q309	L - 2	RV32	D - 7	RV129	E - 3
D13	D - 2 (B)	IC51	F - 9	Q23	A - 8 (B)	Q121	F - 5 (B)	Q220	E - 9 (B)	Q310	M - 2	RV33	C - 2	RV130	E - 3
D14	F - 5	IC52	M - 10	Q24	B - 9 (B)	Q122	F - 5 (B)	Q221	L - 10 (B)	Q311	L - 2	RV34	C - 2	RV131	E - 3
D15	F - 5	IC53	M - 9	Q25	A - 9	Q123	F - 4 (B)	Q222	L - 10 (B)	Q312	L - 2	RV35	C - 2	RV132	E - 3
D16	G - 5	IC55	M - 8	Q26	A - 9	Q124	G - 7	Q223	L - 10 (B)	Q313	L - 2	RV36	C - 3	RV133	E - 3
D17	F - 5	IC56	M - 7	Q27	A - 10	Q125	F - 3 (B)	Q224	L - 10 (B)	Q314	M - 2	RV37	B - 2	RV134	E - 3
D18	C - 2 (B)	IC57	M - 7	Q28	A - 10	Q126	G - 3 (B)	Q225	L - 10 (B)	Q315	M - 2	RV38	B - 2	RV135	E - 3
D20	E - 5	IC58	M - 6	Q29	A - 9 (B)	Q127	G - 4 (B)	Q226	L - 10 (B)	Q316	M - 2	RV39	B - 5	RV136	E - 3
D21	E - 5	IC59	M - 5	Q30	A - 9 (B)	Q128	G - 4 (B)	Q227	L - 10 (B)	Q317	M - 2	RV40	D - 5	RV137	E - 3
D22	G - 10 (B)	IC60	M - 7	Q31	A - 9 (B)	Q129	F - 4 (B)	Q228	L - 10 (B)	Q318	M - 2	RV41	D - 5	RV138	E - 3
D24	G - 9 (B)	IC61	H - 8	Q32	A - 9 (B)	Q130	G - 5 (B)	Q229	L - 10 (B)	Q319	H - 10 (B)	RV42	C - 7	RV139	E - 3
D25	M - 9	IC62	K - 7	Q33	B - 9 (B)	Q131	F - 4 (B)	Q230	L - 10 (B)	Q320	H - 10 (B)	RV43	C - 7	RV140	E - 3
D26	H - 4 (B)	IC63	H - 8	Q34	A - 10 (B)	Q132	F - 4 (B)	Q231	K - 10 (B)	Q321	L - 9 (B)	RV44	D - 2	RV141	E - 3
D27	F - 10	IC64	H - 6	Q35	B - 10 (B)	Q133	F - 4 (B)	Q232	K - 10 (B)	Q322	C - 9 (B)	RV45	D - 2	RV142	E -

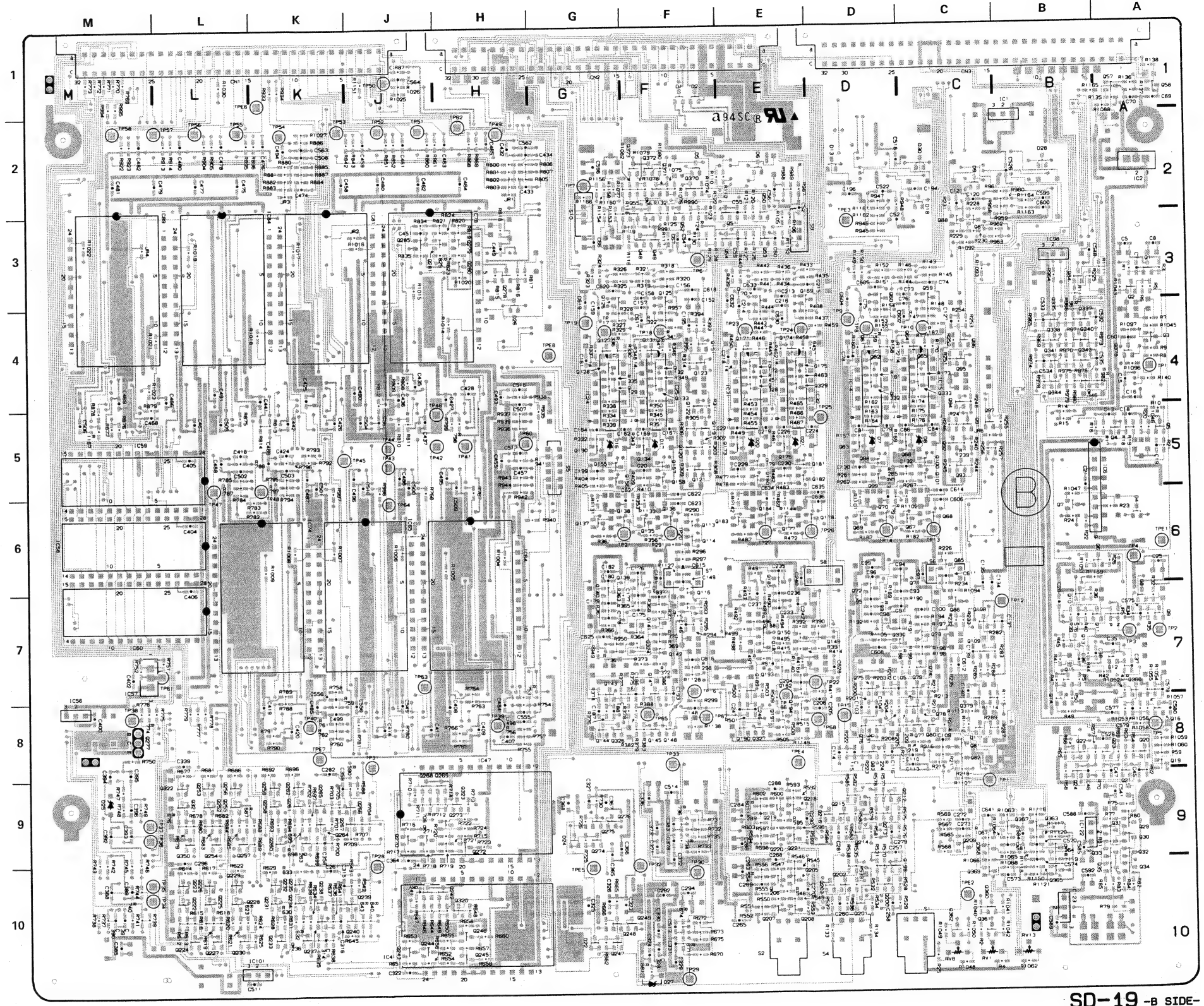
NOTE  
\*-\* ; \*-\* A SIDE  
\*-\* (B); \*-\* B SIDE







**SD-19 -A SIDE-**  
1-631-543-11 (1)  
BVS-3200/3200C ---SD-19  
BVS-3200P/3200CP ---SD-19P



**SD-19 -B SIDE-**  
1-631-543-11 (1)  
BVS-3200/3200C ---SD-19  
BVS-3200P/3200CP ---SD-19P



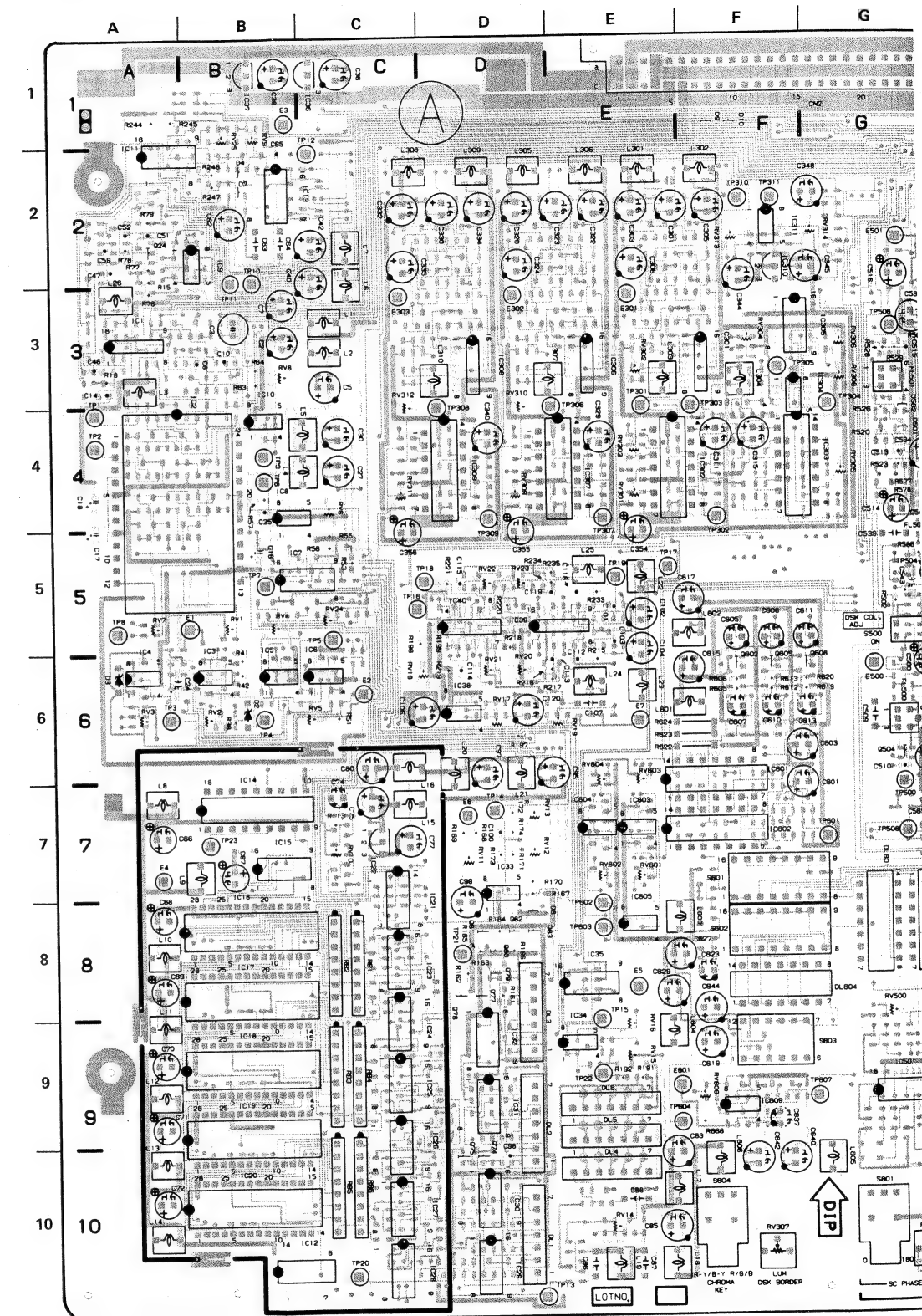
SD-20/20P; SYNC GENERATOR  
CHROMA KEY  
DOWN STREAM KEY SIGNAL GENERATOR

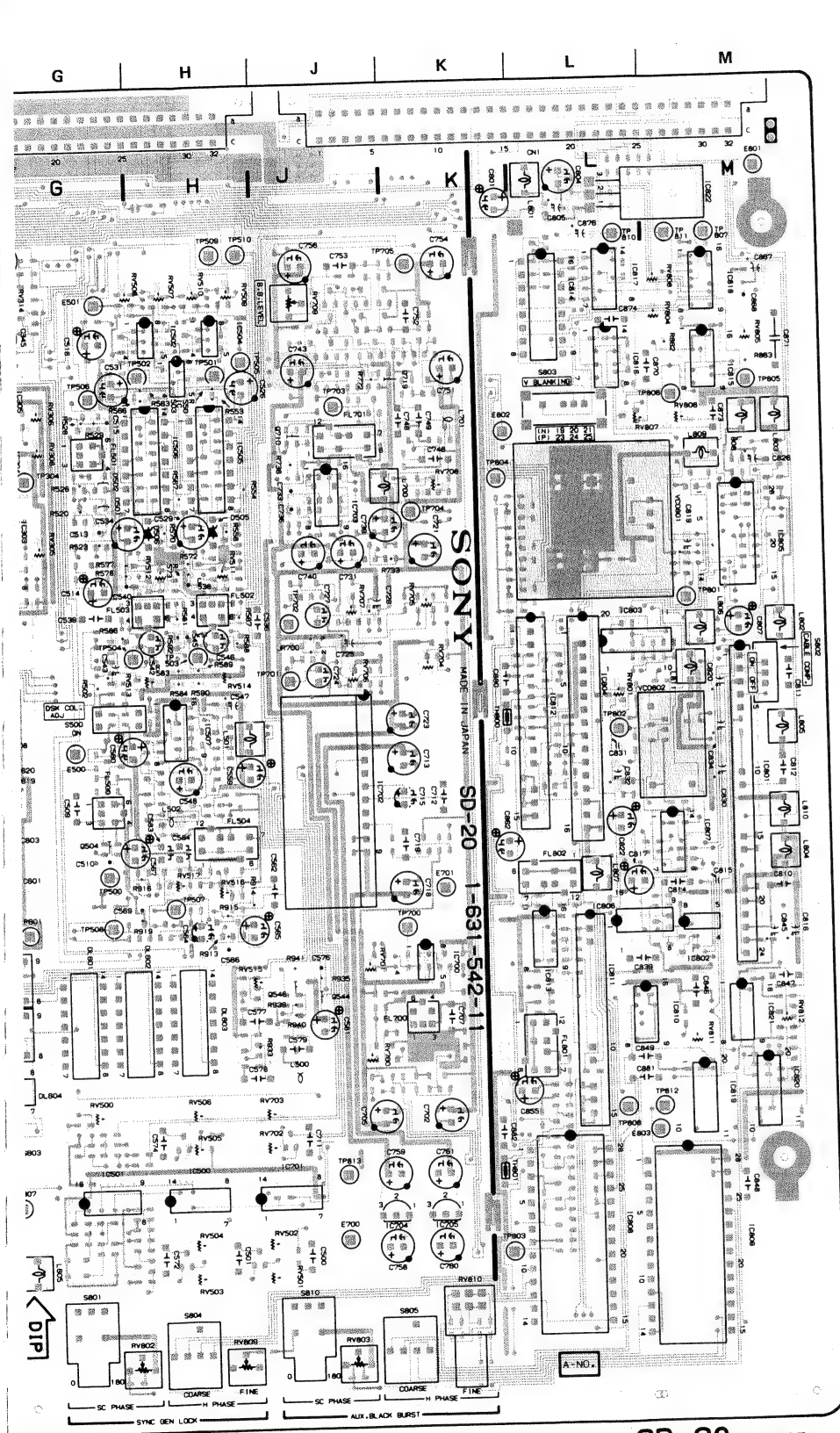
SD-20/20P (1-631-542-11)

CN1	K-1	IC30	D-10	JR812	L-2(B)	Q80	D-8	Q530	H-5(B)	Q818	L-9(B)	RV805	M-2	TP805	M-3
CN2	G-1	IC31	D-9	JR813	L-6(B)	Q81	D-8	Q531	H-6(B)	RV806	M-3	TP806	M-3	TP806	M-3
DL1	D-10	IC32	D-9	JR814	M-7(B)	Q82	D-8	Q532	H-6(B)	RV807	M-3	TP807	M-2	TP807	M-2
DL2	D-9	IC33	D-7	JR815	C-6(B)	Q83	D-8	Q533	H-6(B)	RV808	M-2	TP808	L-9	TP808	L-9
DL3	D-8	IC34	E-8	Q1	B-3(B)	Q84	E-10(B)	Q534	H-6(B)	RV809	H-10	TP810	L-2	TP810	L-2
DL4	E-10	IC35	E-8	Q2	A-3(B)	Q85	E-10(B)	Q535	H-6(B)	RV810	K-10	TP811	M-2	TP811	M-2
DL5	E-9	IC36	C-1	Q3	B-3(B)	Q86	E-10(B)	Q536	H-7(B)	RV811	M-8	TP812	M-8	TP812	M-8
DL6	E-9	IC37	B-1	Q4	B-3(B)	Q87	E-9(B)	Q537	H-7(B)	RV812	M-8	TP813	J-9	TP813	J-9
DL601	G-7	IC38	D-6	Q5	B-3(B)	Q88	E-6(B)	Q538	H-7(B)	S500	G-5	VC0801	L-4		
DL602	H-7	IC39	D-5	Q6	B-3(B)	Q89	D-5(B)	Q539	H-6(B)	S601	F-7	VC0802	M-5		
DL603	H-8	IC40	D-5	Q7	B-3(B)	Q90	E-6(B)	Q540	H-7(B)	S602	F-8				
		IC41	F-3	Q8	A-3(B)	Q91	E-6(B)	Q541	H-10(B)	S603	G-9				
		IC42	F-4	Q9	B-4(B)	Q92	E-6(B)	Q542	H-7(B)	S604	F-10				
		IC43	G-4	Q10	A-4(B)	Q93	D-6(B)	Q543	H-8(B)	S801	G-10				
		IC44	G-3	Q11	A-4(B)	Q94	D-5(B)	Q544	J-8	S802	M-5				
		IC45	G-3	Q12	A-4(B)	Q95	D-5(B)	Q545	J-8(B)	S803	L-3				
		IC46	E-4	Q13	B-4(B)	Q96	D-5(B)	Q546	J-7	S804	H-10				
		IC47	E-4	Q14	A-5(B)	Q97	D-5(B)	Q601	F-6(B)	S805	K-10				
		IC48	D-3	Q15	A-4(B)	Q98	E-5(B)	Q602	F-6	S810	J-10				
		IC49	D-4	Q16	B-4(B)	Q99	E-5(B)	Q603	F-6(B)	TH800	K-5				
		IC50	H-9	Q17	A-5(B)	Q100	B-5(B)	Q604	F-6(B)	TH801	K-9				
		IC51	G-9	Q18	B-6(B)	Q101	B-5(B)	Q605	F-6						
		IC52	H-2	Q19	B-6(B)	Q102	C-5(B)	Q606	F-6(B)						
		IC53	H-3	Q20	B-6(B)	Q103	C-5(B)	Q607	G-6(B)						
		IC54	H-2	Q21	A-3	Q104	A-6(B)	Q608	G-6						
		IC55	H-3	Q22	A-3(B)	Q105	A-6(B)	Q609	G-6(B)						
		IC56	H-3	Q23	A-2(B)	Q106	F-7(B)	Q610	F-7(B)						
		IC57	H-5	Q24	A-2	Q107	F-7(B)	Q611	F-7(B)						
		IC58	H-4	Q25	A-2(B)	Q108	F-9(B)	Q612	G-7(B)						
		IC59	F-7	Q26	A-2(B)	Q109	F-9(B)	Q613	F-9(B)						
		IC60	F-7	Q27	A-2(B)	Q110	F-9(B)	Q614	F-9(B)						
		IC61	E-7	Q28	A-2(B)	Q111	F-9(B)	Q615	F-9(B)						
		IC62	E-7	Q29	C-5(B)	Q112	F-9(B)	Q616	E-8(B)						
		IC63	E-7	Q30	C-5(B)	Q113	F-9(B)	Q617	E-8(B)						
		IC64	E-7	Q31	B-1(B)	Q114	F-9(B)	Q618	E-7(B)						
		IC65	E-7	Q32	B-2(B)	Q115	F-9(B)	Q619	E-7(B)						
		IC66	F-9	Q33	B-2(B)	Q116	F-9(B)	Q620	E-7(B)						
		IC67	K-7	Q34	B-2(B)	Q117	F-9(B)	Q621	E-7(B)						
		IC68	J-9	Q35	C-7(B)	Q118	F-9(B)	Q622	E-7(B)						
		IC69	J-6	Q36	C-7(B)	Q119	F-9(B)	Q623	F-9(B)						
		IC70	J-4	Q37	C-8(B)	Q120	F-9(B)	Q624	F-9(B)						
		IC71	K-9	Q38	C-8(B)	Q121	F-9(B)	Q625	F-9(B)						
		IC72	M-6	Q39	C-8(B)	Q122	F-9(B)	Q626	F-9(B)						
		IC73	M-7	Q40	C-8(B)	Q123	F-9(B)	Q627	F-9(B)						
		IC74	L-5	Q41	C-9(B)	Q124	F-9(B)	Q628	F-9(B)						
		IC75	L-5	Q42	C-9(B)	Q125	F-9(B)	Q629	F-9(B)						
		IC76	L-5	Q43	C-9(B)	Q126	F-9(B)	Q630	F-9(B)						
		IC77	M-4	Q44	C-9(B)	Q127	F-9(B)	Q631	F-9(B)						
		IC78	L-7	Q45	C-10(B)	Q128	F-9(B)	Q632	F-9(B)						
		IC79	M-6	Q46	C-10(B)	Q129	F-9(B)	Q633	F-9(B)						
		IC80	L-9	Q47	C-10(B)	Q130	F-9(B)	Q634	F-9(B)						
		IC81	M-8	Q48	C-10(B)	Q131	F-9(B)	Q635	F-9(B)						
		IC82	M-8	Q49	C-8(B)	Q132	F-9(B)	Q636	F-9(B)						
		IC83	L-2	Q50	C-8(B)	Q133	F-9(B)	Q637	F-9(B)						
		IC84	L-2	Q51	C-9(B)	Q134	F-9(B)	Q638	F-9(B)						
		IC85	M-3	Q52	C-9(B)	Q135	F-9(B)	Q639	F-9(B)						
		IC86	L-3	Q53	C-10(B)	Q136	F-9(B)	Q640	F-9(B)						
		IC87	L-2	Q54	D-10(B)	Q137	F-9(B)	Q641	F-9(B)						
		IC88	M-2	Q55	D-10(B)	Q138	F-9(B)	Q642	F-9(B)						
		IC89	M-8	Q56	D-10(B)	Q139	F-9(B)	Q643	F-9(B)						
		IC90	M-8	Q57	D-10(B)	Q140	F-9(B)	Q644	F-9(B)						
		IC91	M-8	Q58	D-10(B)	Q141	F-9(B)	Q645	F-9(B)						
		IC92	M-2	Q59	D-10(B)	Q142	F-9(B)	Q646	F-9(B)						
		IC93	B-3	Q60	D-10(B)	Q143	F-9(B)	Q647	F-9(B)						
		IC94	A-2	Q61	D-10(B)	Q144	F-9(B)	Q648	F-9(B)						
		IC95	B-10	Q62	D-10(B)	Q145	F-9(B)	Q649	F-9(B)						
		IC96	C-2	Q63	D-10(B)	Q146	F-9(B)	Q650	F-9(B)						
		IC97	B-6	Q64	D-10(B)	Q147	F-9(B)	Q651	F-9(B)						
		IC98	B-7	Q65	D-10(B)	Q148	F-9(B)	Q652	F-9(B)						
		IC99	B-7	Q66	D-9(B)	Q149	F-9(B)	Q653	F-9(B)						
		IC100	B-8	Q67	D-9(B)	Q150	F-9(B)	Q654	F-9(B)						
		IC101	B-8	Q68	D-9(B)	Q151	F-9(B)	Q655	F-9(B)						
		IC102	B-9	Q69	D-9(B)	Q152	F-9(B)	Q656	F-9(B)						
		IC103	B-9	Q70	D-9(B)	Q153	F-9(B)	Q657	F-9(B)						
		IC104	B-10	Q71	D-9(B)	Q154	F-9(B)	Q658	F-9(B)						
		IC105	D-8	Q72	D-8(B)	Q155	F-9(B)	Q659	F-9(B)						
		IC106	C-7	Q73	D-8(B)	Q156	F-9(B)	Q660	F-9(B)						
		IC107	D-8	Q74	D-10	Q157	F-9(B)	Q661	F-9(B)						
		IC108	D-9	Q75	D-10	Q158	F-9(B)	Q662	F-9(B)						
		IC109	D-9	Q76	D-9(B)	Q159	F-9(B)	Q663	F-9(B)						
		IC110	D-9	Q77	D-8	Q160	F-9(B)	Q664	F-9(B)						
		IC111	D-10	Q78	D-8	Q161	F-9(B)	Q665	F-9(B)						
		IC112	D-10	Q79	D-8	Q162	F-9(B)	Q666	F-9(B)						
		IC113	D-10	Q80	D-8	Q163	F-9(B)	Q667	F-9(B)						
		IC114	D-10	Q81	D-8	Q164	F-9(B)	Q668	F-9(B)						
		IC115	D-10	Q82	D-8	Q165	F-9(B)	Q669	F-9(B)						
		IC116	D-10	Q83	D-8	Q166	F-9(B)	Q670	F-9(B)						
		IC117	D-10	Q84	D-8	Q167	F-9(B)	Q671	F-9(B)						
		IC118	D-10	Q85	D-8	Q168	F-9(B)	Q672	F-9(B)						
		IC119	D-10	Q86	D-8	Q169	F-9(B)	Q673	F-9(B)						
		IC120	D-10	Q87	D-8	Q170	F-9(B)	Q674	F-9(B)						
		IC121	D-10	Q88	D-8	Q171	F-9(B)	Q675	F-9(B)						
		IC122	D-10	Q89	D-8	Q172	F-9(B)	Q676	F-9(B)						
		IC123	D-10	Q90	D-8	Q173	F-9(B)	Q677	F-9(B)						
		IC124	D-10	Q91	D-8	Q174	F-9(B)	Q678	F-9(B)						
		IC125	D-10	Q92	D-8	Q175	F-9(B)	Q679	F-9(B)						
		IC126	D-10	Q93	D-8	Q176	F-9(B)	Q680	F-9(B)						
		IC127	D-10	Q94	D-8	Q177	F-9(B)	Q681	F-9(B)						
		IC128	D-10	Q95	D-8	Q178	F-9(B)	Q682	F-9(B)						
		IC129	D-10	Q96	D-8	Q179	F-9(B)	Q683	F-9(B)						

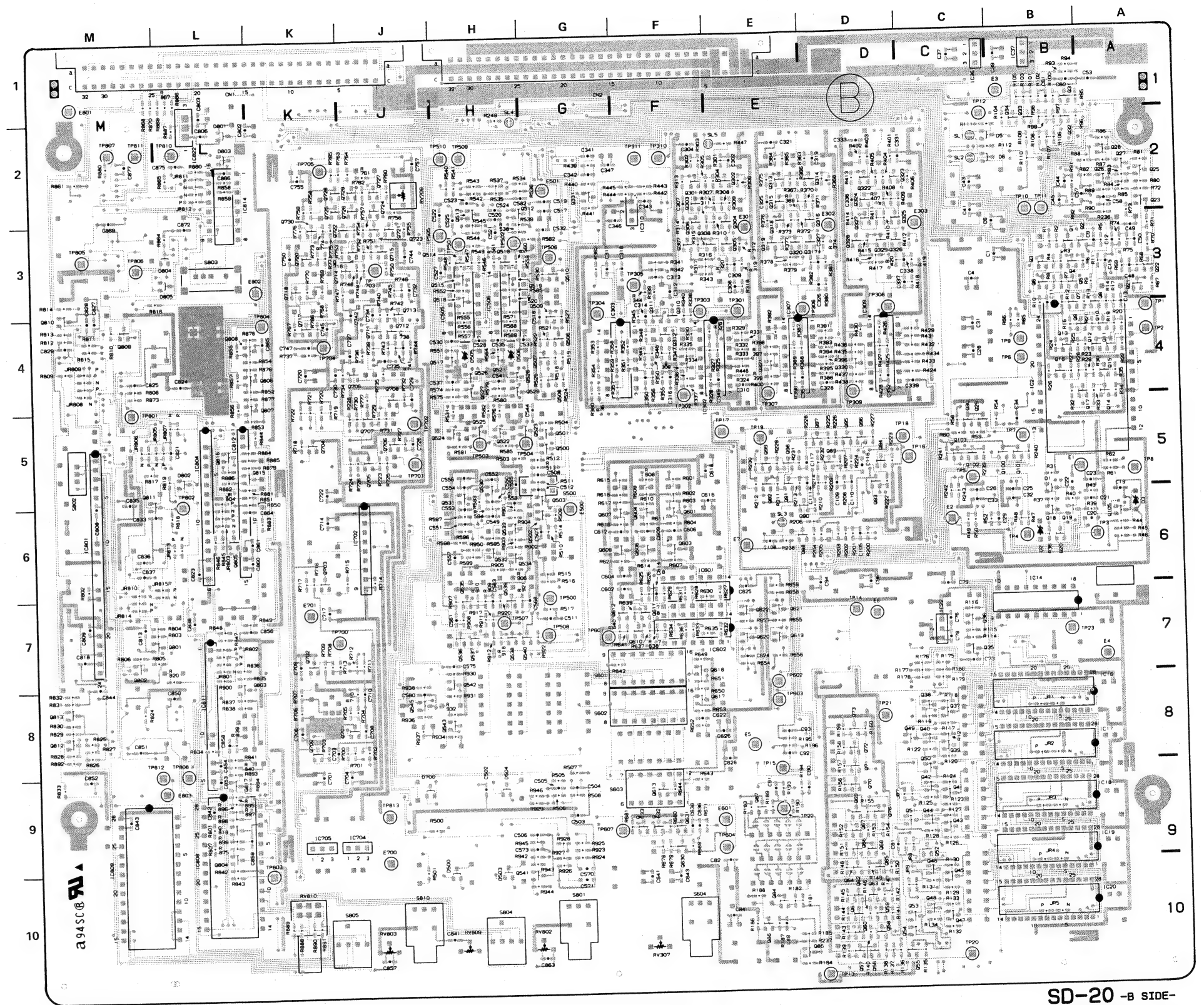
NOTE

\*\*\* : \*\*\* A SIDE  
\*\*\* (B) : \*\*\* B SIDE





SD-20 -A SIDE-  
1-631-542-11 (1)  
BVS-3100/3200/3200CP----SD-20  
BVS-3100P/3200P/3200CP----SD-20P



SD-20 -B SIDE-  
1-631-542-11 (1)  
BVS-3100/3200/3200CP----SD-20  
BVS-3100P/3200P/3200CP----SD-20P

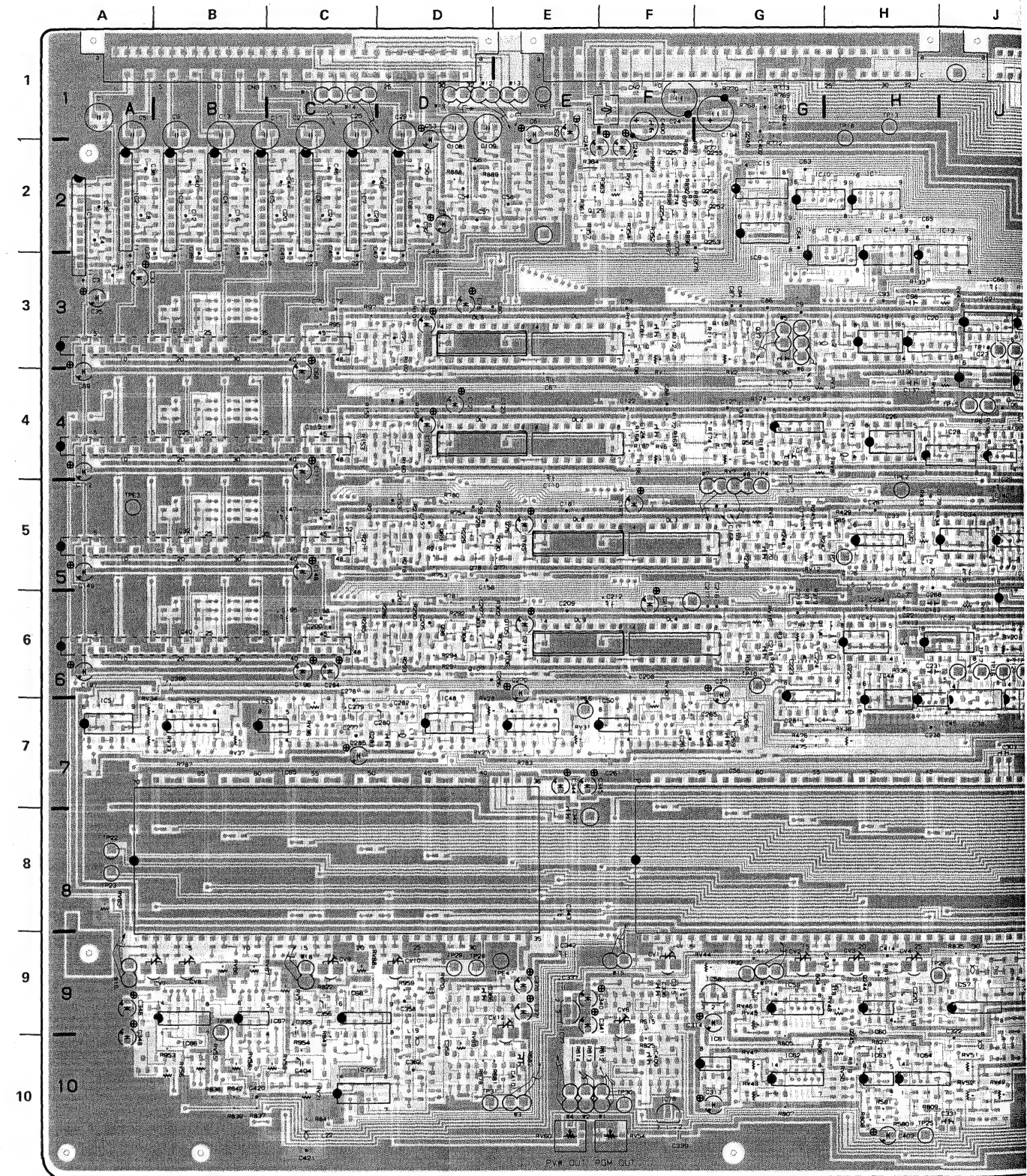


## EF-20/20P; Y (COMPOSITE) SIGNAL PROCESSOR

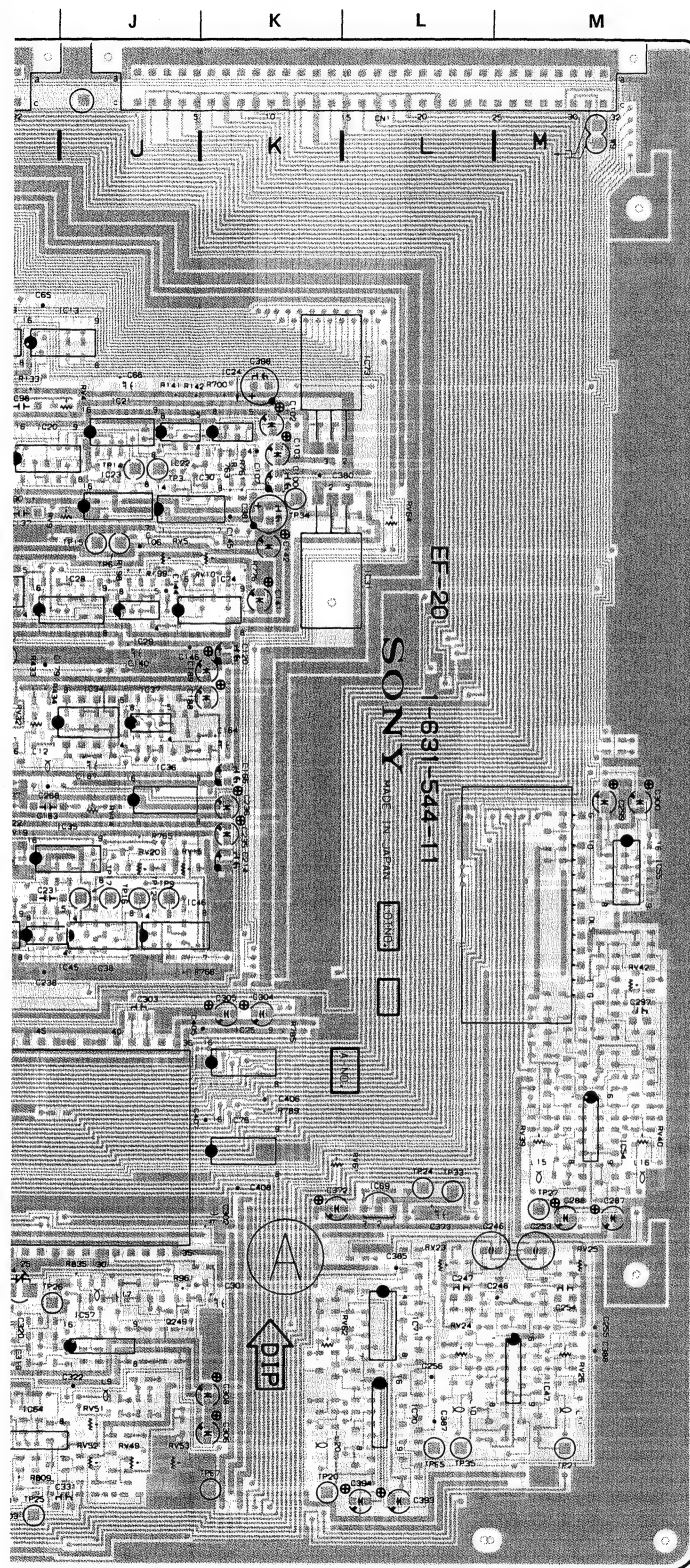
EF-20/20P (1-631-544-11)

CN1	L-1	IC57	J-9	Q62	J-4(B)	Q146	B-7(B)	Q232	L-10(B)	RV68	C-9
CN2	F-1	IC58	G-9	Q63	C-5(B)	Q147	B-7(B)	Q234	J-9(B)	RV69	D-10
CN3	B-1	IC59	G-9	Q64	C-5(B)	Q148	C-7(B)	Q235	F-10(B)	RV70	D-9
		IC60	H-9	Q65	C-5(B)	Q149	C-7(B)	Q237	F-10(B)	RV71	C-10
CV1	F-9	IC61	G-10	Q66	D-5(B)	Q150	C-7(B)	Q238	D-10(B)		
CV2	G-9	IC62	G-10	Q67	D-5(B)	Q151	D-7(B)	Q240	G-1	TPE1	G-6
CV3	H-9	IC63	H-10	Q68	D-5(B)	Q152	D-7(B)	Q241	G-1	TPE2	H-5
CV4	H-9	IC64	H-10	Q69	D-5	Q153	C-7(B)	Q242	C-9(B)	TPE3	A-5
CV6	F-9	IC65	C-7	Q70	D-5(B)	Q154	M-7(B)	Q243	H-9(B)	TPE4	D-9
CV7	B-9	IC66	B-9	Q71	D-5(B)	Q155	M-7(B)	Q244	H-9	TPE5	L-10
CV8	B-9	IC67	B-9	Q72	D-5(B)	Q156	M-8(B)	Q245	H-10	TPE6	E-7
CV9	C-9	IC68	C-9	Q73	E-5(B)	Q157	M-8(B)	Q246	H-10(B)	TPE7	K-10
CV10	D-9	IC69	L-8	Q74	E-5(B)	Q158	M-8(B)	Q247	C-9(B)		
CV12	E-9	IC70	L-10	Q75	D-5(B)	Q159	M-8(B)	Q248	C-9(B)		
		IC71	L-9	Q76	D-5	Q160	M-8(B)	Q249	J-9	TP1	G-3
DL1	E-3	IC72	C-10	Q77	D-5	Q161	M-7(B)	Q250	B-10(B)	TP3	J-3
DL2	E-4	IC73	K-3	Q78	D-5	Q162	M-7(B)	Q251	B-10	TP4	G-4
DL3	F-5	IC74	K-4	Q79	G-5(B)	Q163	M-7(B)	Q252	G-2	TP6	J-4
DL4	F-6	IC75	K-7	Q80	G-5(B)	Q164	M-7(B)	Q253	G-2	TP7	H-5
DL5	M-6	IC76	K-8	Q81	G-5(B)	Q165	M-7(B)	Q254	F-2	TP9	J-6
DL6	D-3	IC77	E-9	Q82	G-5(B)	Q166	M-7(B)	Q255	G-2	TP10	G-6
DL7	D-3	IC78	F-10	Q83	G-5(B)	Q167	M-6(B)	Q256	G-2	TP12	J-6
DL8	E-5			Q84	G-5(B)	Q168	K-9(B)	Q257	F-2	TP13	H-1
DL9	E-6			Q85	H-5	Q169	J-9(B)			TP14	J-3
		Q1	A-2(B)	Q86	H-5(B)	Q170	G-9(B)	RV1	F-4	TP15	J-4
D1	F-1(B)	Q2	A-2(B)	Q87	H-5(B)	Q171	G-9(B)	RV2	G-4	TP16	J-6
D2	F-1(B)	Q3	A-2(B)	Q88	H-5(B)	Q172	H-9(B)	RV3	H-4	TP17	J-6
D4	A-7(B)	Q4	A-2(B)	Q89	H-5(B)	Q173	H-9(B)	RV4	J-3	TP18	H-1
D6	M-6(B)	Q5	B-2(B)	Q90	J-6(B)	Q174	J-10(B)	RV5	J-4	TP20	M-10
D7	D-6(B)	Q6	B-2(B)	Q91	J-5(B)	Q175	J-10(B)	RV6	F-4	TP21	M-10
D8	C-6(B)	Q7	B-2(B)	Q92	C-6(B)	Q176	J-10(B)	RV7	G-4	TP22	A-8
		Q8	B-2(B)	Q93	C-6(B)	Q177	J-10(B)	RV8	H-4	TP23	A-8
IC1	A-2	Q9	C-2(B)	Q94	C-6(B)	Q178	H-10(B)	RV9	H-4	TP24	L-8
IC2	A-2	Q10	C-2(B)	Q95	D-6(B)	Q179	J-10(B)	RV10	K-4	TP25	H-10
IC3	B-2	Q11	C-2(B)	Q96	D-6(B)	Q180	F-9(B)	RV11	G-5	TP26	H-9
IC4	B-2	Q12	C-2(B)	Q97	D-6(B)	Q181	F-9(B)	RV12	G-5	TP27	M-8
IC5	B-2	Q13	C-2(B)	Q98	D-6	Q182	F-10(B)	RV13	G-6	TP28	D-9
IC6	C-2	Q14	D-2(B)	Q99	D-6(B)	Q183	F-10(B)	RV14	J-6	TP29	D-9
IC7	C-2	Q15	D-2(B)	Q100	D-6(B)	Q184	F-9(B)	RV15	J-6	TP30	F-10
IC8	D-2	Q16	D-2(B)	Q101	D-6(B)	Q185	F-9(B)	RV16	G-6	TP31	D-10
IC9	G-2	Q17	D-2(B)	Q102	E-6(B)	Q186	F-9(B)	RV17	G-6	TP32	G-9
IC10	G-2	Q18	D-2(B)	Q103	E-6(B)	Q187	F-9(B)	RV18	H-6	TP33	L-8
IC11	H-2	Q19	D-2(B)	Q104	D-6(B)	Q188	F-10(B)	RV19	J-6	TP34	K-4
IC12	H-3	Q20	D-2(B)	Q105	D-6	Q189	F-10(B)	RV20	F-2	TP35	L-10
IC13	J-3	Q21	E-2(B)	Q106	D-6	Q190	F-10(B)	RV21	L-9	TP36	B-9
IC14	H-3	Q22	E-2(B)	Q107	D-6	Q191	F-10(B)	RV22	L-9		
IC15	G-2	Q23	E-2(B)	Q108	G-6(B)	Q192	A-10(B)	RV23	M-9		
IC17	B-3	Q24	E-2(B)	Q109	G-6(B)	Q193	A-9(B)	RV24	M-9		
IC18	G-4	Q25	C-3(B)	Q110	G-6(B)	Q194	A-9(B)	RV25	D-7		
IC19	H-3	Q26	C-3(B)	Q111	G-6(B)	Q195	C-9(B)	RV26	M-9		
IC20	H-3	Q27	C-3(B)	Q112	G-6(B)	Q196	C-9(B)	RV27	D-7		
IC21	J-3	Q28	D-3(B)	Q113	G-6(B)	Q197	C-10(B)	RV28	F-6		
IC22	J-3	Q29	D-3(B)	Q114	G-6	Q198	C-10(B)	RV29	F-6		
IC23	J-4	Q30	D-3(B)	Q115	G-6(B)	Q199	D-9(B)	RV30	F-6		
IC24	K-3	Q31	F-3(B)	Q116	G-6(B)	Q200	D-10(B)	RV31	E-7		
IC25	B-4	Q32	F-3(B)	Q117	G-7(B)	Q201	D-10(B)	RV32	B-7		
IC26	H-4	Q33	F-3(B)	Q118	H-7(B)	Q202	D-9(B)	RV33	A-7		
IC28	J-4	Q34	F-3(B)	Q119	H-6(B)	Q203	D-10(B)	RV34	C-7		
IC29	J-4	Q35	F-3(B)	Q120	J-7(B)	Q204	D-10(B)	RV35	B-7		
IC30	J-4	Q36	F-3(B)	Q121	F-2(B)	Q205	D-9(B)	RV36	H-7		
IC31	K-4	Q37	G-3	Q122	F-2(B)	Q206	D-9(B)	RV37	M-8		
IC32	B-5	Q38	G-3(B)	Q123	E-2(B)	Q207	D-10(B)	RV38	M-8		
IC33	H-5	Q39	G-3(B)	Q124	E-2(B)	Q208	D-10(B)	RV39	M-8		
IC34	J-5	Q40	G-3(B)	Q125	F-2(B)	Q209	D-10(B)	RV40	M-7		
IC35	H-6	Q41	H-3(B)	Q126	E-2(B)	Q210	D-9(B)	RV41	G-9		
IC36	J-6	Q42	J-3(B)	Q127	E-2(B)	Q211	E-9(B)	RV42	G-9		
IC37	J-5	Q43	K-3(B)	Q128	E-2(B)	Q212	E-9(B)	RV43	G-10		
IC38	J-7	Q44	C-4(B)	Q129	E-2	Q213	E-10(B)	RV44	G-9		
IC40	B-6	Q45	C-4(B)	Q130	M-9(B)	Q214	E-10(B)	RV45	J-10		
IC41	G-7	Q46	C-4(B)	Q131	L-9(B)	Q215	G-2(B)	RV46	H-10		
IC42	H-6	Q47	D-4(B)	Q132	M-10(B)	Q216	G-2(B)	RV47	J-10		
IC44	H-7	Q48	D-4(B)	Q133	M-10(B)	Q217	F-2(B)	RV48	J-10		
IC45	H-7	Q49	D-4(B)	Q134	M-9(B)	Q218	F-2(B)	RV49	F-10		
IC46	J-7	Q50	F-4(B)	Q135	M-9(B)	Q219	F-2(B)	RV50	B-10		
IC47	M-9	Q51	F-4(B)	Q136	M-10(B)	Q220	F-2(B)	RV51	B-10		
IC48	D-7	Q52	F-4(B)	Q137	M-10(B)	Q221	F-2(B)	RV52	C-9		
IC49	E-7	Q53	F-4(B)	Q138	E-7(B)	Q222	F-2(B)	RV53	B-10		
IC50	F-7	Q54	F-4(B)	Q139	E-7(B)	Q223	L-9(B)	RV54	C-10		
IC51	A-7	Q55	F-4(B)	Q140	F-7(B)	Q224	L-9(B)	RV55	E-10		
IC52	B-7	Q56	G-4	Q141	F-7(B)	Q225	L-10(B)	RV56	K-8		
IC53	B-7	Q57	G-4(B)	Q142	G-7(B)	Q226	L-10(B)	RV57	K-9		
IC54	M-8	Q58	G-4(B)	Q143	G-7(B)	Q227	L-9(B)	RV58	L-4		
IC55	M-6	Q59	H-4(B)	Q144	G-7(B)	Q228	L-9(B)	RV59	A-8		
IC56	G-8	Q60	H-4(B)	Q145	F-7(B)	Q229	L-9(B)	RV60	B-9		
		Q61	J-4(B)			Q230	K-9(B)	RV61	B-9		
						Q231	L-10(B)	RV62	B-9		

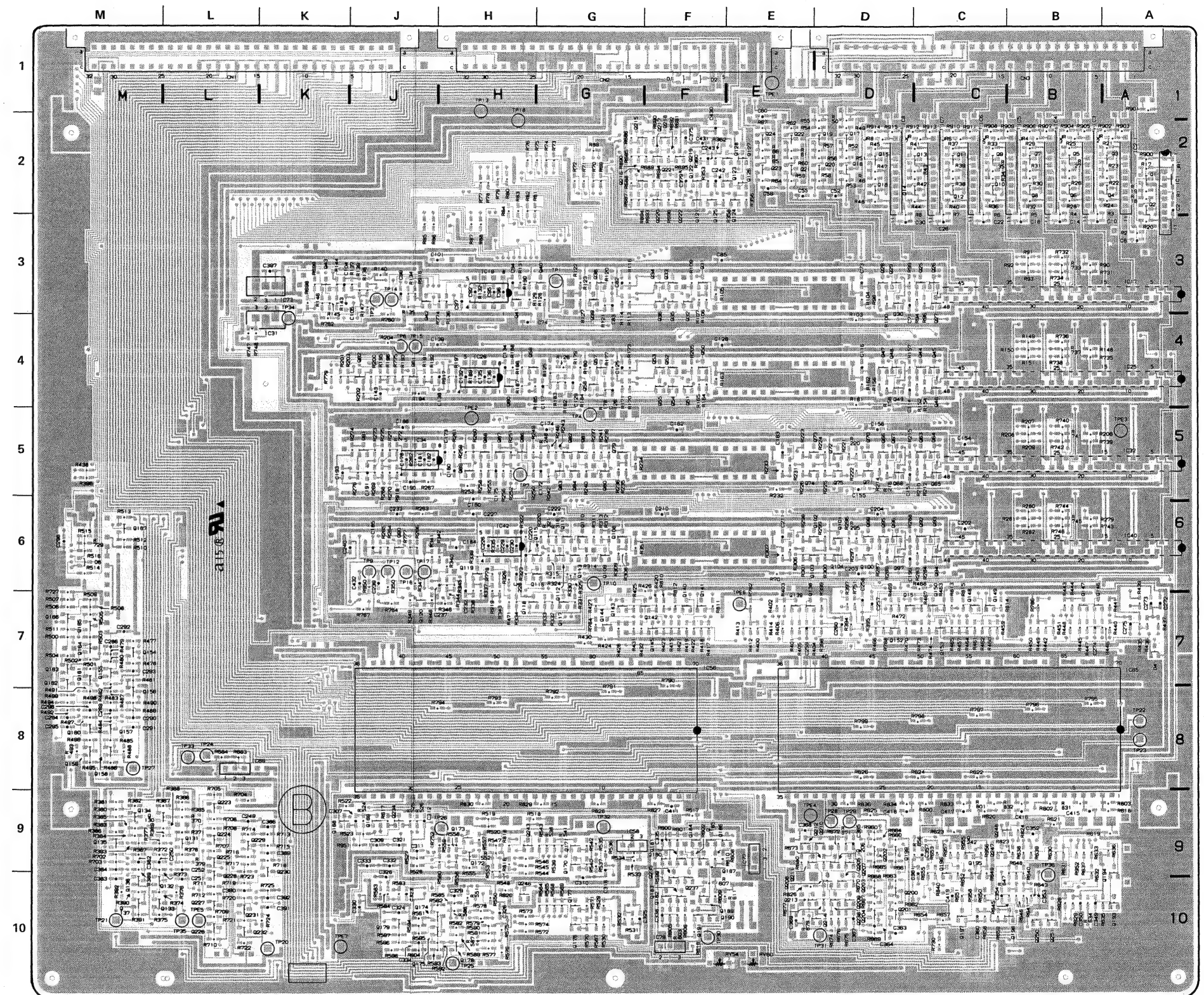
NOTE  
 \* - \* : \* - \* A SIDE  
 \* - \* (B) : \* - \* B SIDE







EF-20 -A SIDE-  
1-631-544-11 (1)  
BVS-3200/3200C ---- EF-20  
BVS-3200P/3200CP ---- EF-20P



EF-20 -B SIDE-  
1-631-544-11 (1)  
BVS-3200/3200C ---- EF-20  
BVS-3200P/3200CP ---- EF-20P

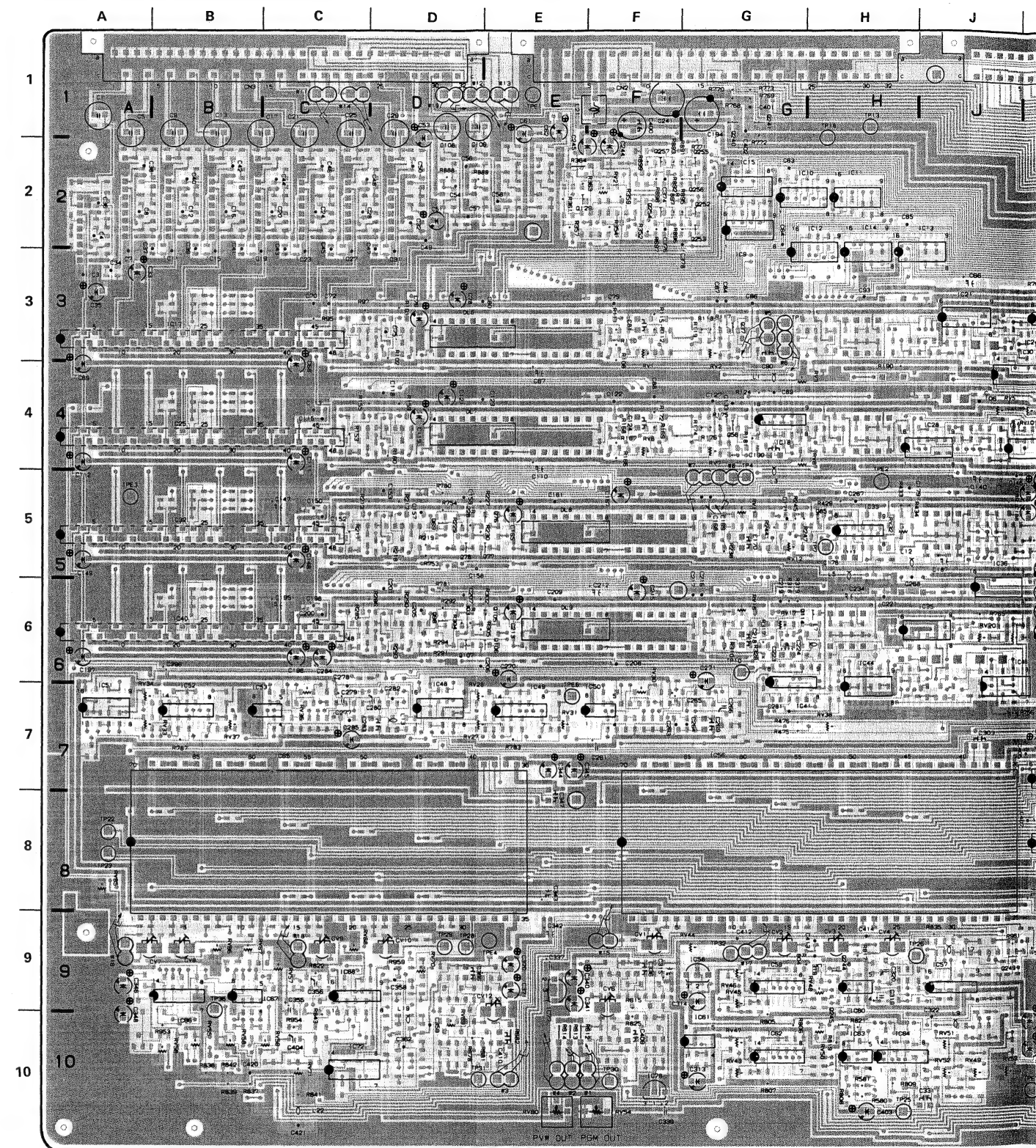


## EF-20C/20CP; B-Y (R-Y) SIGNAL PROCESSOR

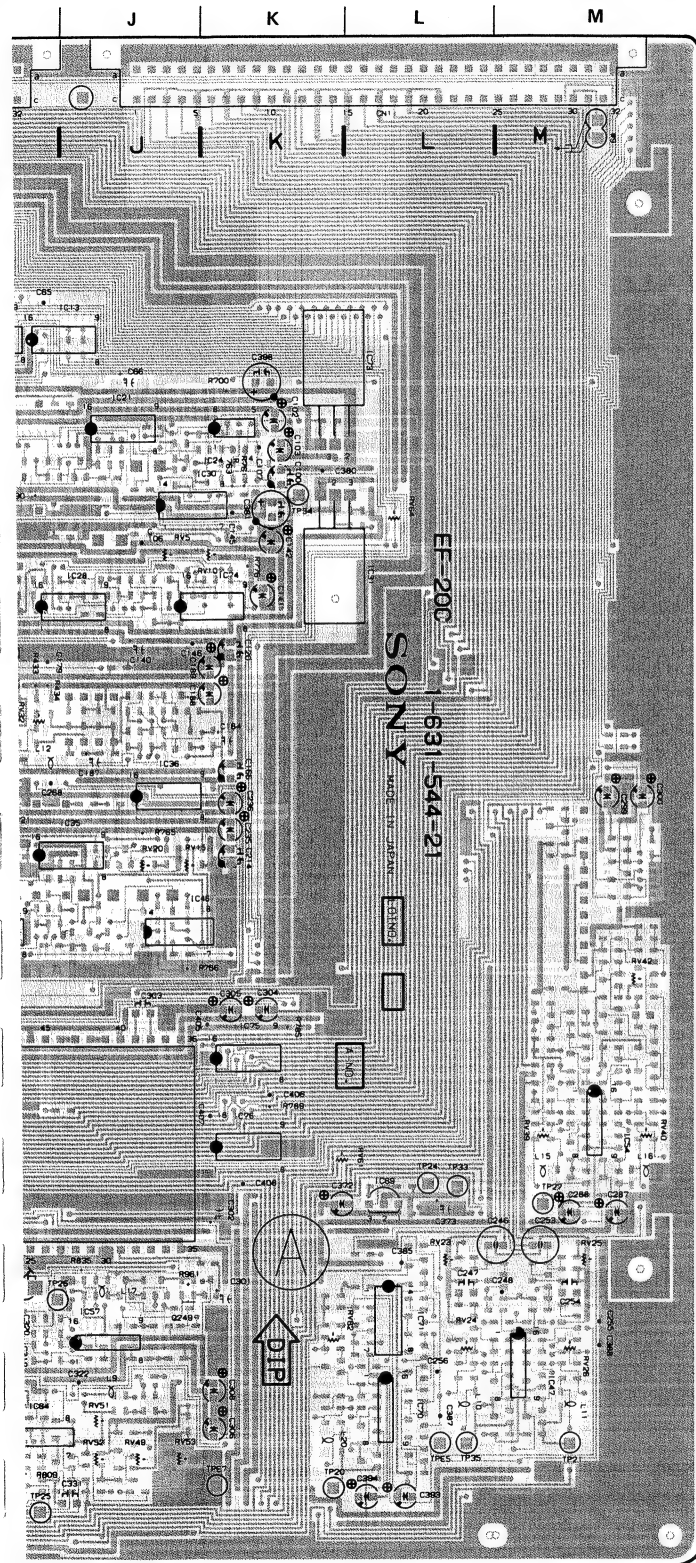
EF-20C/20CP (1-631-544-21)

CN1	L-1	JR4	B-2(B)	Q85	H-5	Q177	G-10(B)	RV20	J-6
CN2	F-1	JR5	C-2(B)	Q86	H-5(B)	Q178	H-10(B)	RV21	F-2
CN3	B-1	JR6	C-2(B)	Q87	H-5(B)	Q179	J-10(B)	RV23	L-9
		JR7	D-2(B)	Q90	C-6(B)	Q180	F-9(B)	RV24	L-9
CV1	F-9	JR8	D-2(B)	Q92	C-6(B)	Q181	F-9(B)	RV25	M-9
CV2	G-9			Q93	C-6(B)	Q182	F-10(B)	RV26	M-9
CV3	H-9	Q1	A-2(B)	Q94	D-6(B)	Q183	F-10(B)	RV27	D-7
CV4	H-9	Q2	A-2(B)	Q95	D-6(B)	Q184	F-9(B)	RV28	D-7
CV6	F-9	Q3	A-2(B)	Q96	D-6(B)	Q185	F-9(B)	RV30	F-7
CV7	B-9	Q4	A-2(B)	Q97	D-6	Q186	F-9(B)	RV31	E-7
CV8	B-9	Q5	B-2(B)	Q98	D-6(B)	Q187	F-9(B)	RV32	H-5
CV9	C-9	Q6	B-2(B)	Q99	D-6(B)	Q189	F-10(B)	RV33	B-7
CV10	D-9	Q7	B-2(B)	Q100	D-6(B)	Q190	F-10(B)	RV34	A-7
CV12	E-9	Q8	B-2(B)	Q101	D-6(B)	Q191	F-10(B)	RV36	C-7
		Q9	C-2(B)	Q102	E-6(B)	Q193	A-10(B)	RV37	B-7
DL6	D-3	Q10	C-2(B)	Q103	E-5(B)	Q194	A-9(B)	RV38	H-7
DL7	D-4	Q11	C-2(B)	Q104	D-6(B)	Q195	C-9(B)	RV39	M-8
DL8	E-5	Q12	C-2(B)	Q105	E-6	Q196	C-9(B)	RV40	M-8
DL9	E-6	Q13	C-2(B)	Q106	E-6	Q197	C-10(B)	RV42	M-7
		Q14	D-2(B)	Q107	D-6	Q198	C-10(B)	RV43	G-10
D1	F-1(B)	Q15	D-2(B)	Q108	G-6(B)	Q199	D-9(B)	RV44	G-9
D2	F-1(B)	Q16	D-2(B)	Q109	G-6(B)	Q200	D-10(B)	RV45	G-9
D4	A-7(B)	Q17	D-2(B)	Q110	G-6(B)	Q201	D-10(B)	RV46	G-9
D6	M-6(B)	Q18	D-2(B)	Q111	G-6(B)	Q202	D-9(B)	RV47	G-10
D7	D-6(B)	Q19	D-2(B)	Q112	G-6(B)	Q203	D-10(B)	RV48	H-9
D8	C-6(B)	Q20	D-2(B)	Q113	G-6(B)	Q204	D-10(B)	RV49	J-10
		Q21	E-2(B)	Q114	H-6	Q205	D-9(B)	RV50	H-10
IC9	G-2	Q22	E-2(B)	Q115	H-6(B)	Q206	D-9(B)	RV51	J-10
IC10	G-2	Q23	E-2(B)	Q116	H-6(B)	Q207	D-9(B)	RV52	J-10
IC11	H-2	Q24	E-2(B)	Q119	H-6(B)	Q208	E-10(B)	RV53	J-10
IC12	H-3	Q25	C-3(B)	Q121	F-2(B)	Q209	D-10(B)	RV54	F-10
IC13	J-3	Q26	C-3(B)	Q122	F-2(B)	Q210	D-9(B)	RV55	B-10
IC14	H-3	Q27	C-4(B)	Q123	F-2(B)	Q211	E-9(B)	RV56	B-10
IC15	G-2	Q28	D-3(B)	Q124	F-2(B)	Q212	E-9(B)	RV57	C-9
IC17	B-3	Q29	D-3(B)	Q125	F-2(B)	Q213	E-10(B)	RV58	B-10
IC18	G-4	Q30	D-4(B)	Q126	E-2(B)	Q214	D-10(B)	RV59	C-10
IC21	J-3	Q31	F-3(B)	Q127	E-2(B)	Q215	F-2(B)	RV60	E-10
IC25	B-4	Q32	F-3(B)	Q128	F-2(B)	Q216	F-2(B)	RV61	K-8
IC28	J-4	Q33	F-3(B)	Q129	E-2	Q217	F-2(B)	RV62	K-9
IC30	K-4	Q34	F-3(B)	Q130	M-9(B)	Q218	F-2(B)	RV64	L-4
IC31	L-4	Q35	F-3(B)	Q131	L-9(B)	Q219	F-2(B)	RV65	A-8
IC32	B-5	Q36	F-3(B)	Q132	M-10(B)	Q220	F-2(B)	RV66	B-9
IC33	H-5	Q37	G-3	Q133	M-10(B)	Q221	F-2(B)	RV67	B-9
IC36	J-6	Q38	G-3(B)	Q134	M-9(B)	Q222	F-2(B)	RV68	C-9
IC40	B-6	Q39	G-3(B)	Q135	M-9(B)	Q223	L-9(B)	RV69	D-10
IC41	G-6	Q42	J-3(B)	Q136	M-10(B)	Q224	L-9(B)	RV70	D-9
IC44	H-6	Q44	C-4(B)	Q137	M-10(B)	Q225	L-9(B)	RV71	C-10
IC46	J-6	Q45	C-4(B)	Q138	E-6(B)	Q226	L-10(B)		
IC47	M-10	Q46	C-4(B)	Q139	E-7(B)	Q227	L-10(B)	TPE1	E-1
IC48	D-7	Q47	D-4(B)	Q140	F-7(B)	Q228	L-9(B)	TPE2	H-5
IC49	E-7	Q48	D-4(B)	Q141	F-7(B)	Q229	L-9(B)	TPE3	A-5
IC50	F-7	Q49	D-4(B)	Q142	G-7(B)	Q230	K-9(B)	TPE4	E-9
IC51	A-7	Q50	F-4(B)	Q143	G-7(B)	Q231	L-10(B)	TPE5	L-10
IC52	B-7	Q51	F-4(B)	Q144	G-7(B)	Q232	L-10(B)	TPE6	E-7
IC53	C-7	Q52	F-4(B)	Q145	F-7(B)	Q234	J-9(B)	TPE7	K-10
IC54	M-8	Q53	F-4(B)	Q146	B-6(B)	Q235	F-10(B)		
IC55	M-6	Q54	F-4(B)	Q147	B-6(B)	Q237	F-10(B)	TP1	G-3
IC56	G-8	Q55	F-4(B)	Q148	C-7(B)	Q238	D-10(B)	TP4	G-5
IC57	J-9	Q56	G-4	Q149	C-7(B)	Q240	G-1	TP7	H-5
IC58	G-9	Q57	G-4(B)	Q150	C-6(B)	Q241	G-1	TP10	G-6
IC59	G-9	Q58	G-4(B)	Q151	D-7(B)	Q242	C-9(B)	TP13	H-1
IC60	H-9	Q61	J-4(B)	Q152	D-7(B)	Q243	H-9(B)	TP18	H-1
IC61	G-10	Q63	C-5(B)	Q153	C-7(B)	Q244	H-9	TP20	K-10
IC62	G-10	Q64	C-5(B)	Q154	M-7(B)	Q245	H-10	TP21	M-10
IC63	H-10	Q65	C-5(B)	Q155	M-7(B)	Q246	H-10(B)	TP22	A-8
IC64	H-10	Q66	D-5(B)	Q156	M-8(B)	Q247	C-9(B)	TP23	A-8
IC65	C-8	Q67	D-5(B)	Q157	M-8(B)	Q248	C-9(B)	TP24	L-8
IC66	B-9	Q68	D-5(B)	Q158	M-8(B)	Q249	J-9	TP25	H-10
IC67	B-9	Q69	D-5	Q159	M-8(B)	Q250	B-10(B)	TP26	J-9
IC68	C-9	Q70	D-5(B)	Q160	M-8(B)	Q251	B-10(B)	TP27	M-8
IC69	L-8	Q71	D-5(B)	Q161	M-7(B)			TP28	D-9
IC70	L-10	Q72	D-5(B)	Q162	M-7(B)	RV1	F-3	TP29	D-9
IC71	L-9	Q73	E-5(B)	Q163	M-7(B)	RV2	G-3	TP30	F-10
IC72	C-10	Q74	E-5(B)	Q164	M-7(B)	RV3	G-4	TP31	D-10
IC73	L-3	Q75	D-5(B)	Q165	M-7(B)	RV5	J-4	TP32	G-9
IC74	K-4	Q76	E-5	Q168	K-9(B)	RV6	F-5	TP33	L-8
IC75	K-7	Q77	E-5	Q169	J-9(B)	RV7	G-4	TP34	K-4
IC76	K-8	Q78	D-5	Q170	G-9(B)	RV8	G-4	TP35	L-10
IC77	E-9	Q79	G-5(B)	Q171	G-9(B)	RV10	K-3	TP36	B-9
IC78	F-10	Q80	G-5(B)	Q172	H-9(B)	RV11	G-5		
		Q81	G-5(B)	Q173	H-9(B)	RV12	G-5		
JR1	A-2(B)	Q82	G-5(B)	Q174	J-10(B)	RV15	J-6		
JR2	B-2(B)	Q83	G-5(B)	Q175	J-10(B)	RV16	G-6		
JR3	B-2(B)	Q84	G-5(B)	Q176	G-10(B)	RV17	G-6		

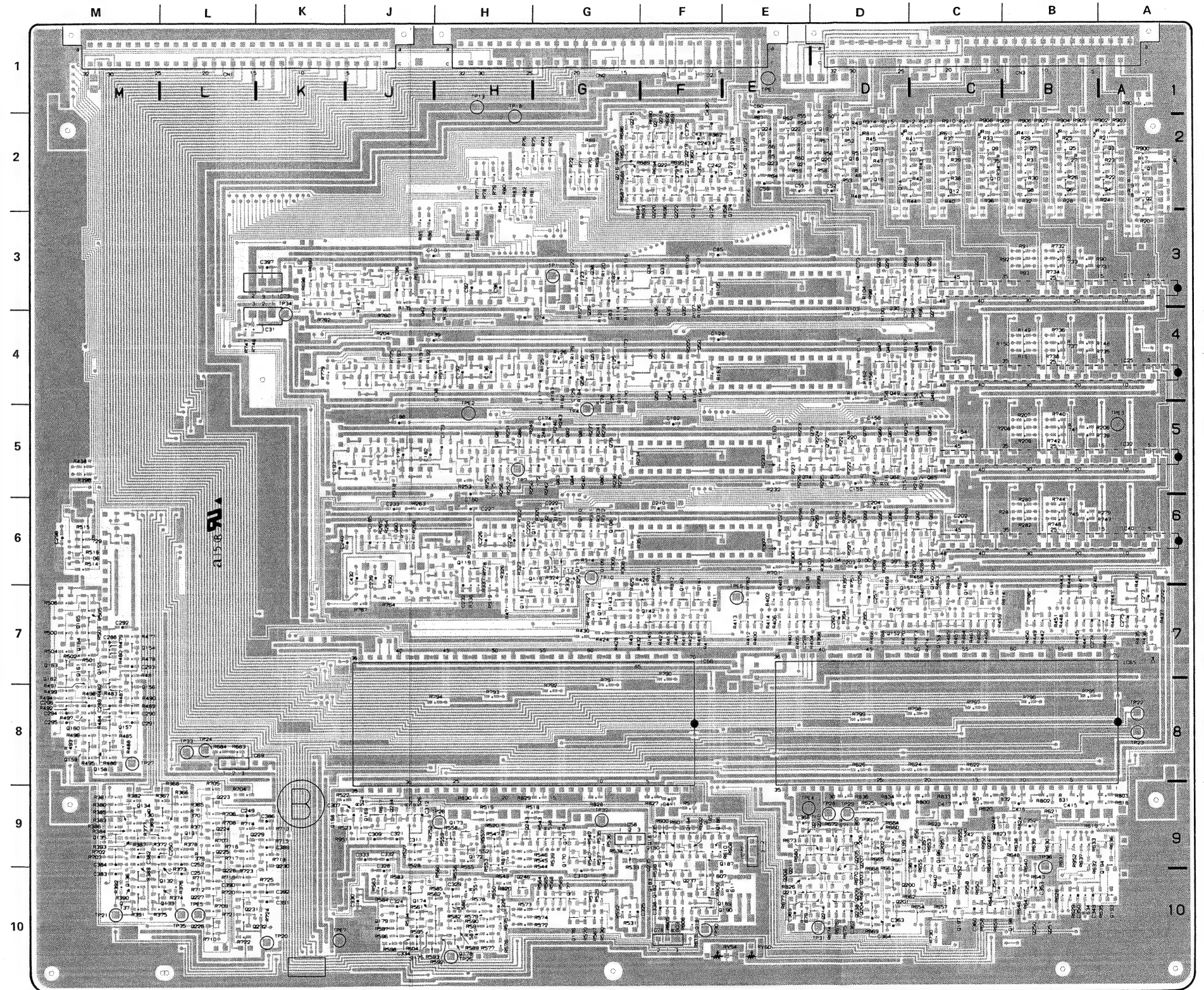
NOTE  
 \*\* : \*\*A SIDE  
 \*\* (B) : \*\*B SIDE







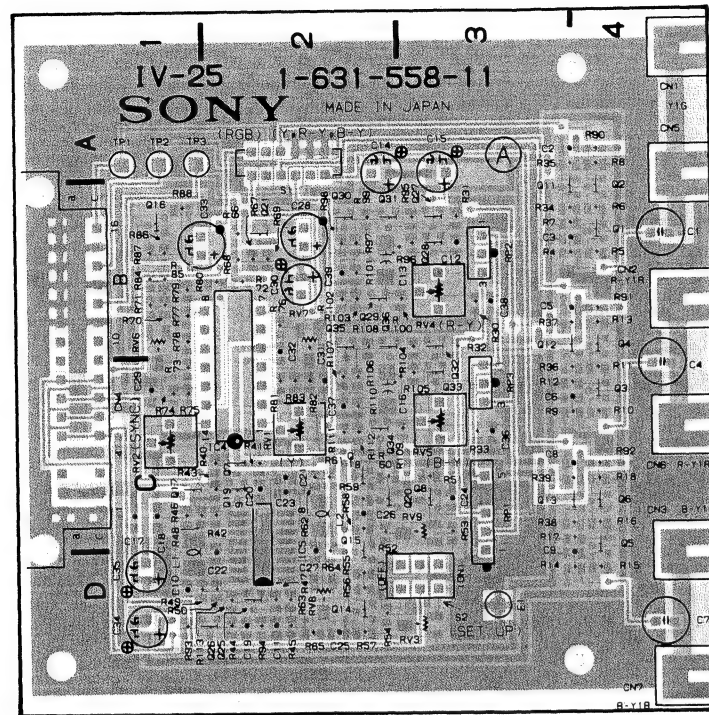
EF-20C -A SIDE-  
1-631-544-21 (1)  
BVS-3200C --- EF-20C  
BVS-3200CP --- EF-20CP



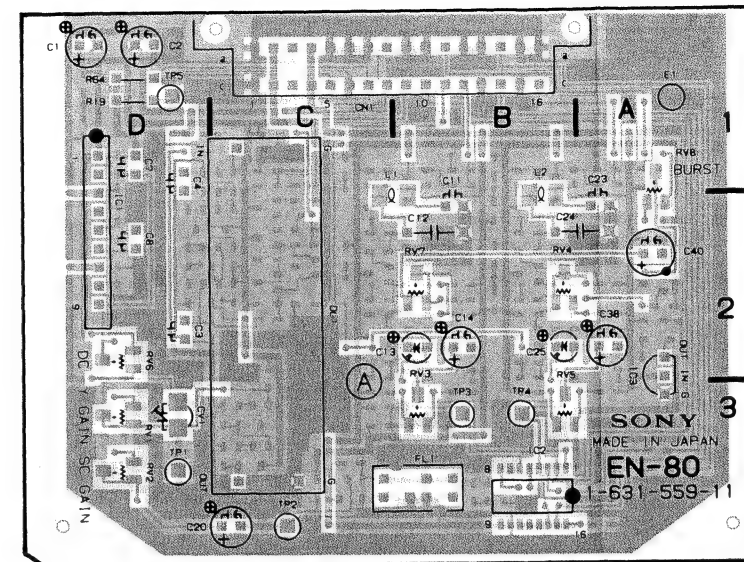
EF-20C -B SIDE-  
1-631-544-21 (1)  
BVS-3200C --- EF-20C  
BVS-3200CP --- EF-20CP



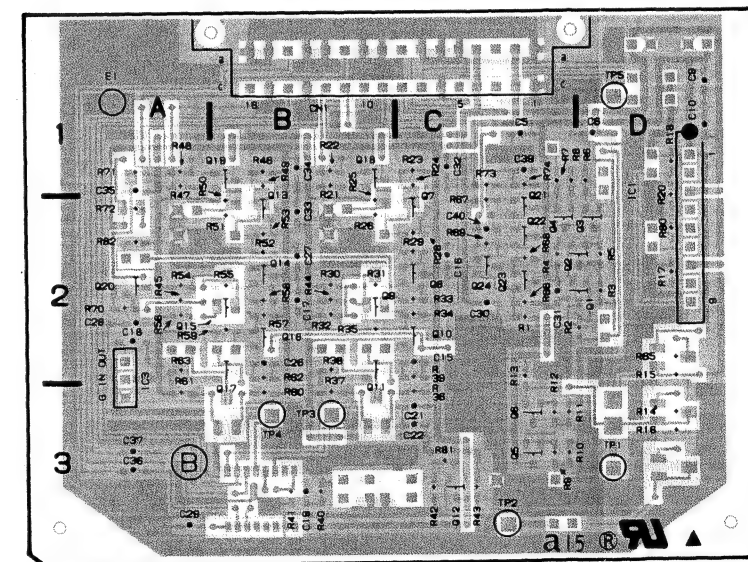
EN-80/80P; ENCODER  
IV-25/25P; MODE SET FOR INPUT VIDEO SIGNAL



**IV-25 -A SIDE-**  
1-631-558-11 (1)  
BVS-3200C---IV-25  
BVS-3200CP---IV-25P



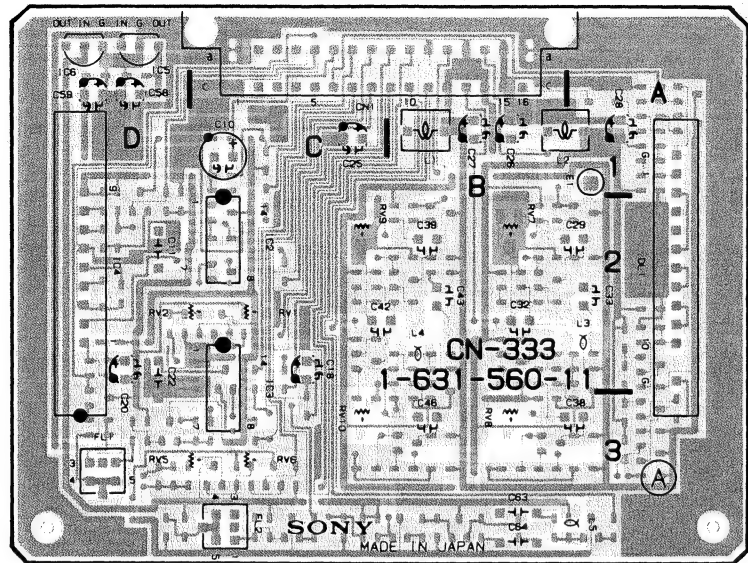
**EN-80 -A SIDE-**  
1-631-559-11 (1)  
BVS-3200C---EN-80  
BVS-3200CP---EN-80P



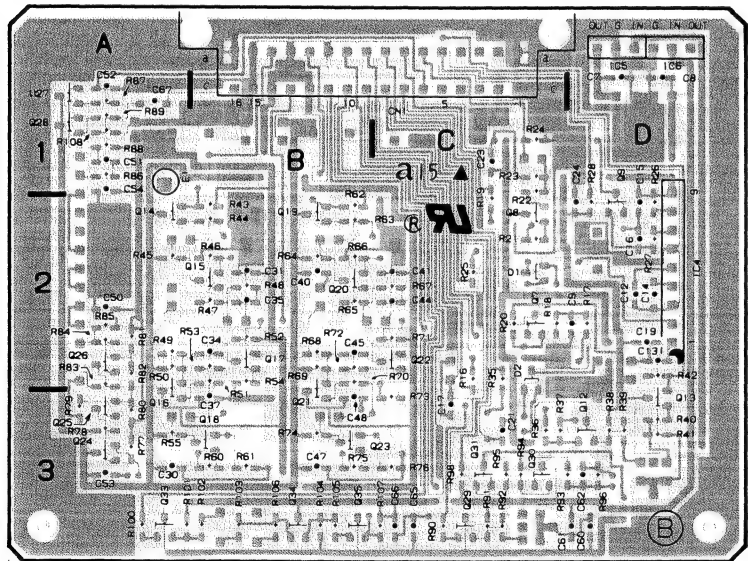
**EN-80 -B SIDE-**  
1-631-559-11 (1)  
BVS-3200C---EN-80  
BVS-3200CP---EN-80P



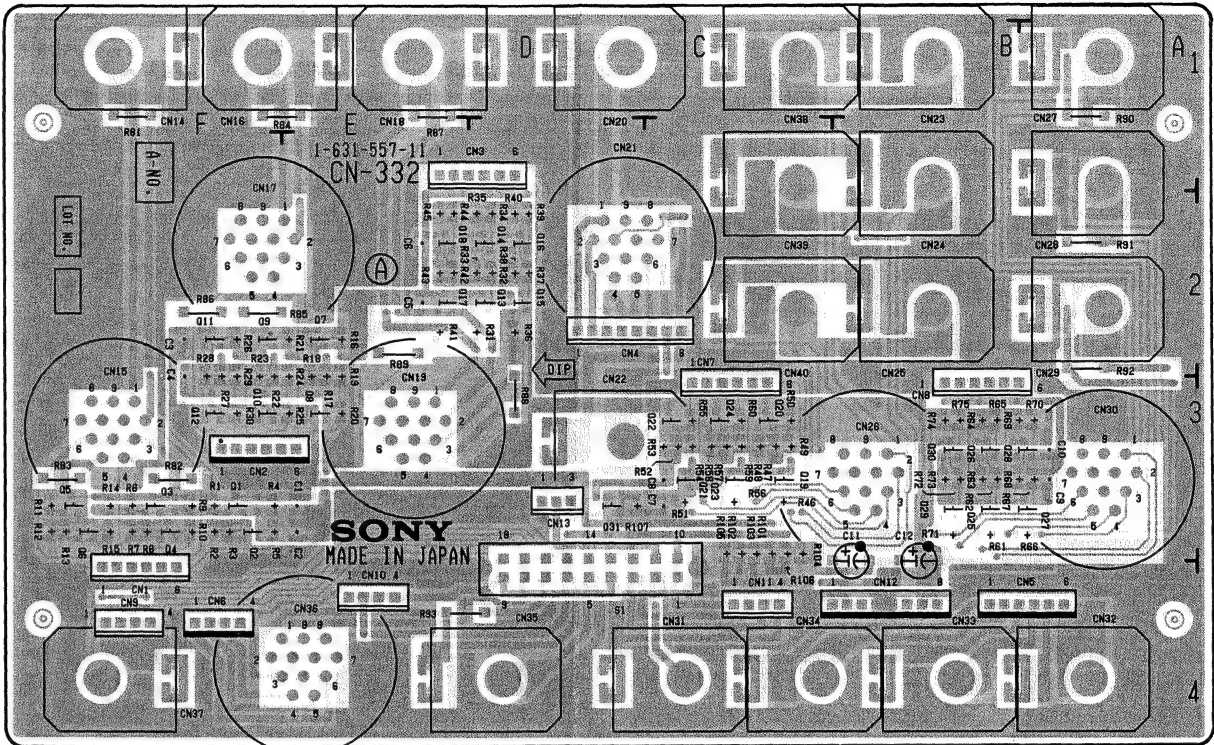
CN-332; CONNECTOR BOARD  
CN-333/333P; SYNC SEPARATOR  
LE-55; LED



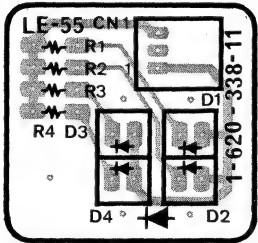
**CN-333 -A SIDE-**  
1-631-560-11 (1)  
BVS-3200C-----CN-333  
BVS-3200CP-----CN-333P



**CN-333 -B SIDE-**  
1-631-560-11 (1)  
BVS-3200C-----CN-333  
BVS-3200CP-----CN-333P

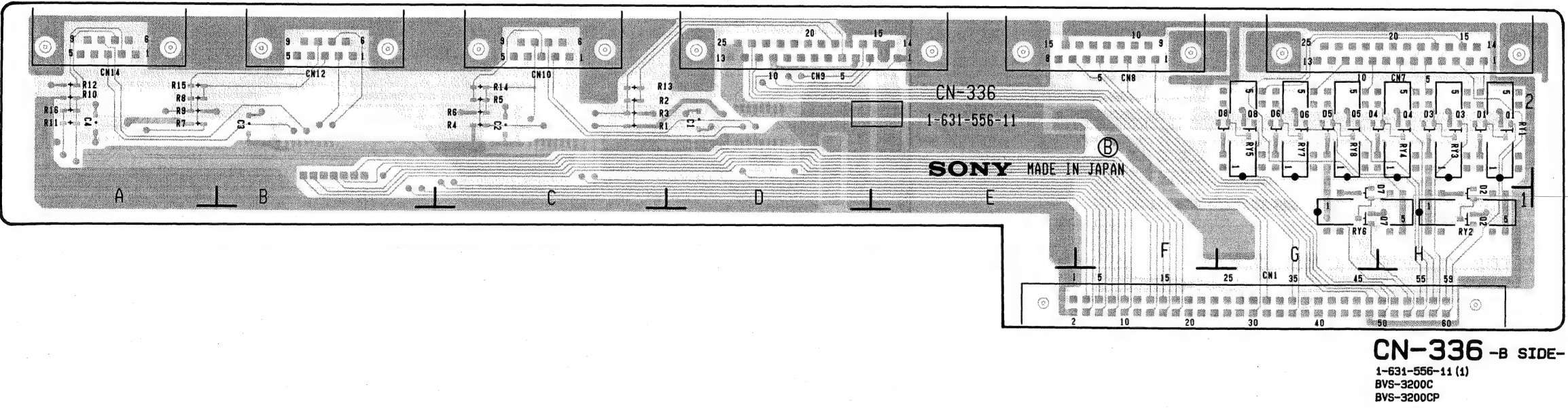
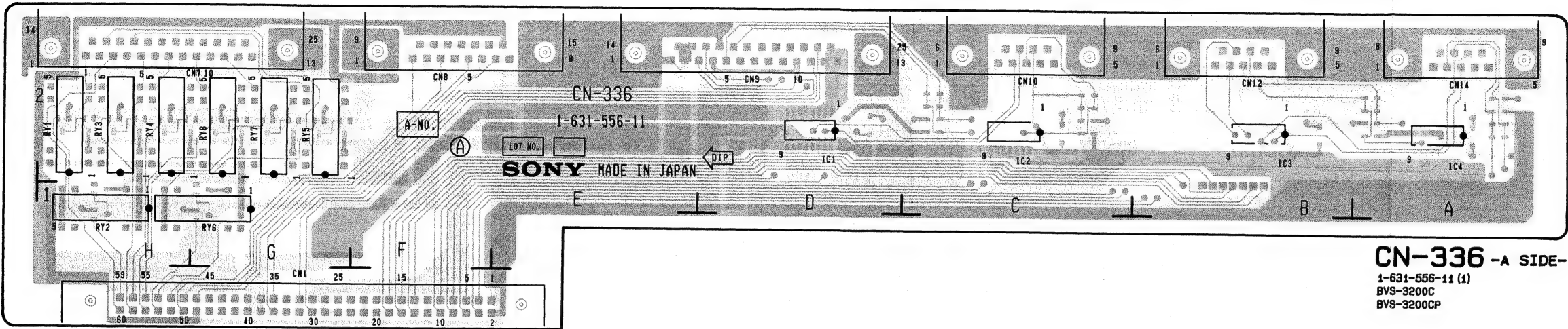


**CN-332 -A SIDE-**  
1-631-557-11 (1)  
BVS-3200C  
BVS-3200CP



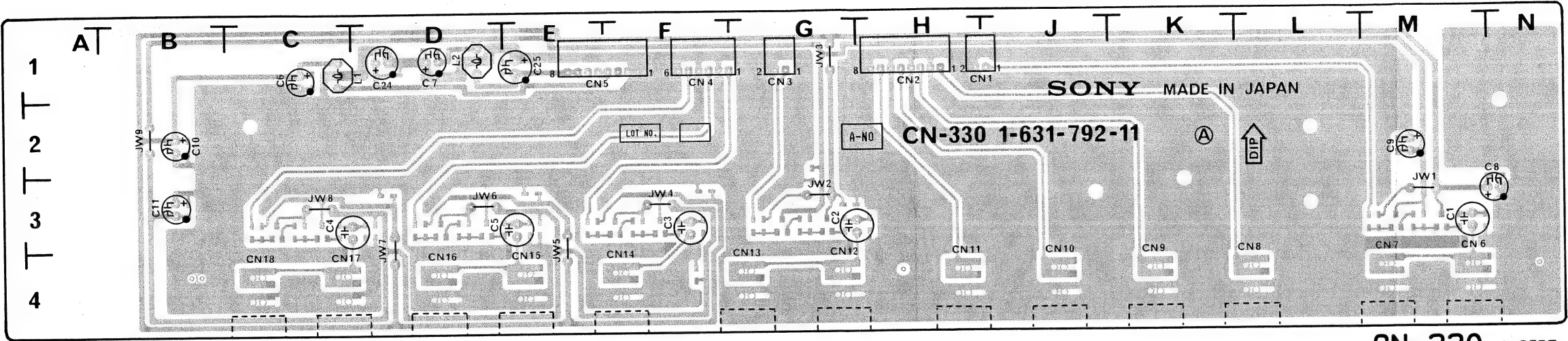
**LE-55**  
-COMPONENT SIDE-  
1-620-338-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP

CN-336; CONNECTOR BOARD

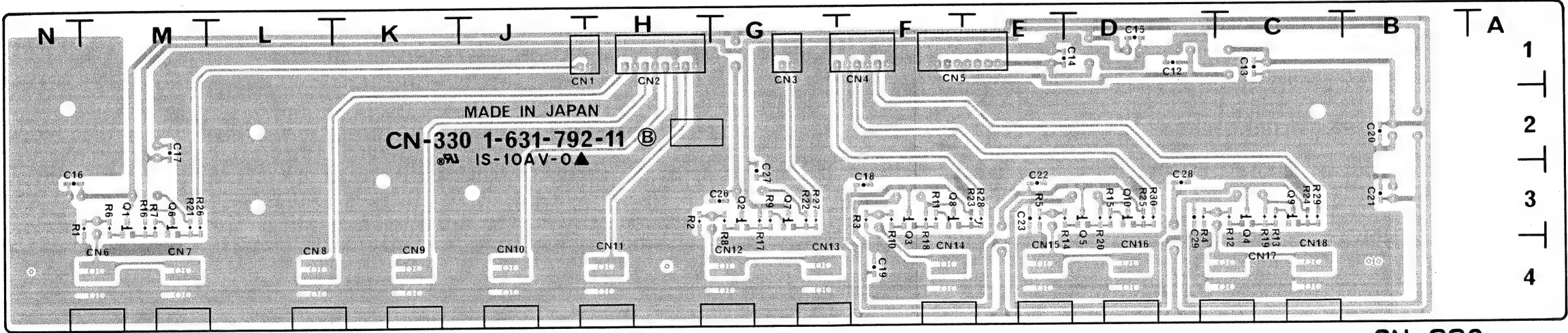




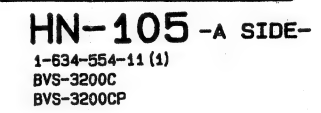
CN-330; CONNECTOR BOARD



CN-330 -A SIDE-  
1-631-792-11 (1)  
BVS-3200C  
BVS-3200CP

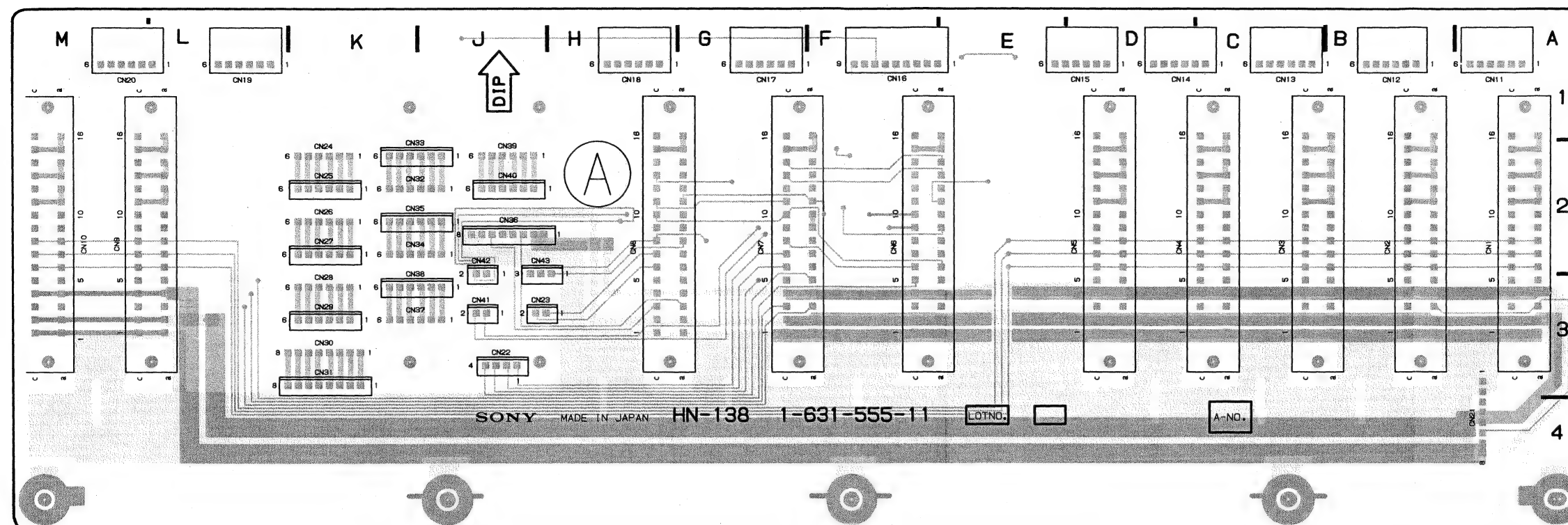


CN-330 -B SIDE-  
1-631-792-11 (1)  
BVS-3200C  
BVS-3200CP

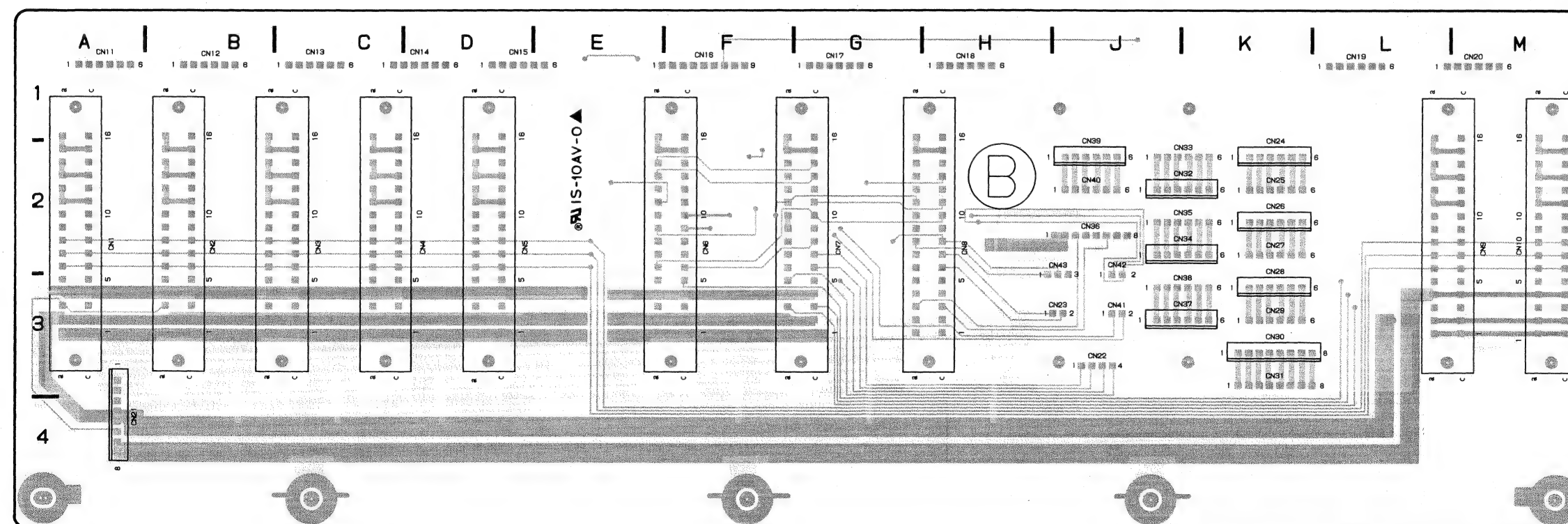




HN-138; MOTHER BOARD



**HN-138 -A SIDE-**  
1-631-555-11 (1)  
BVS-3200C  
BVS-3200CP



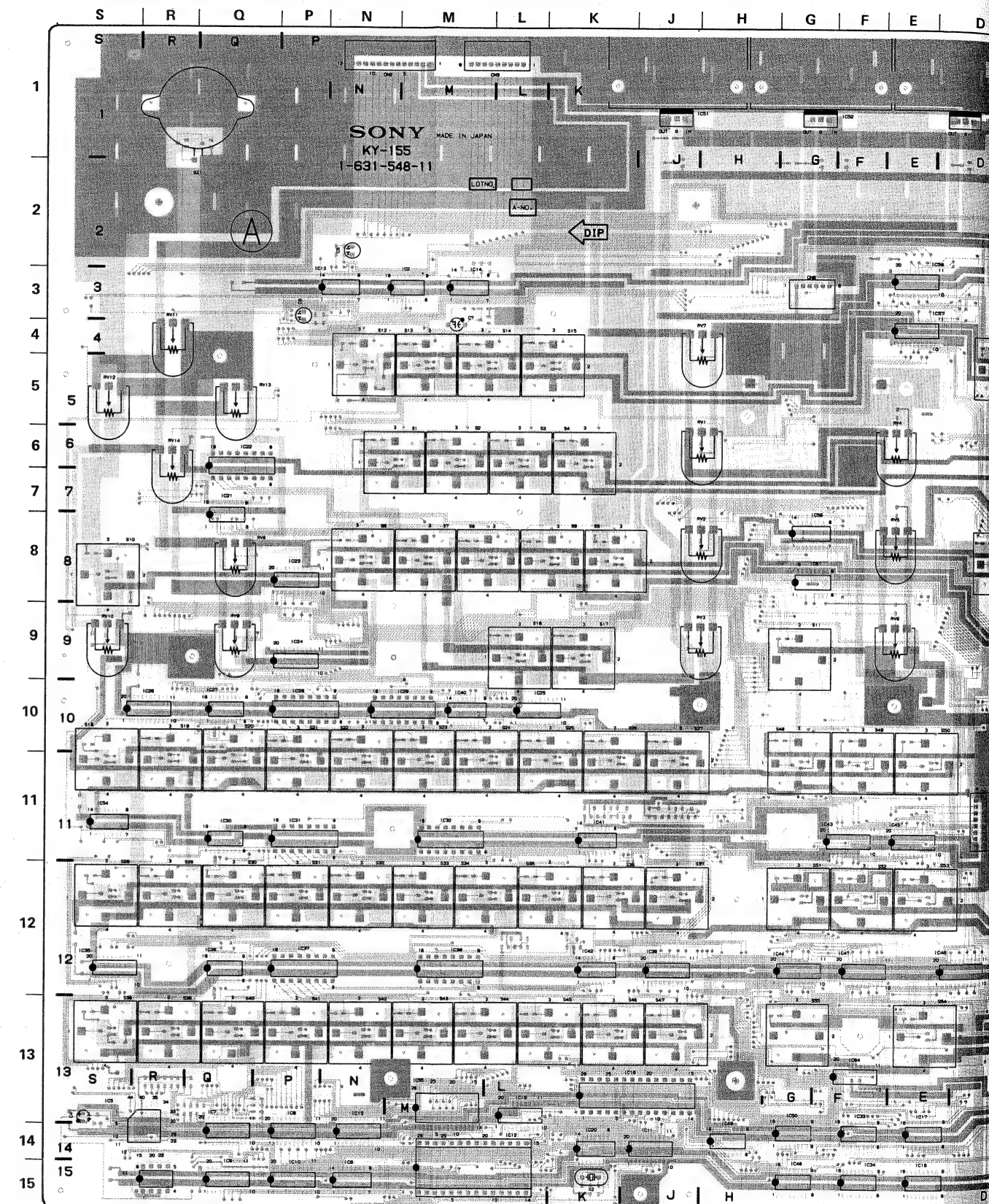
**HN-138 -B SIDE-**  
1-631-555-11 (1)  
BVS-3200C  
BVS-3200CP

KY-155; SWITCH BOARD

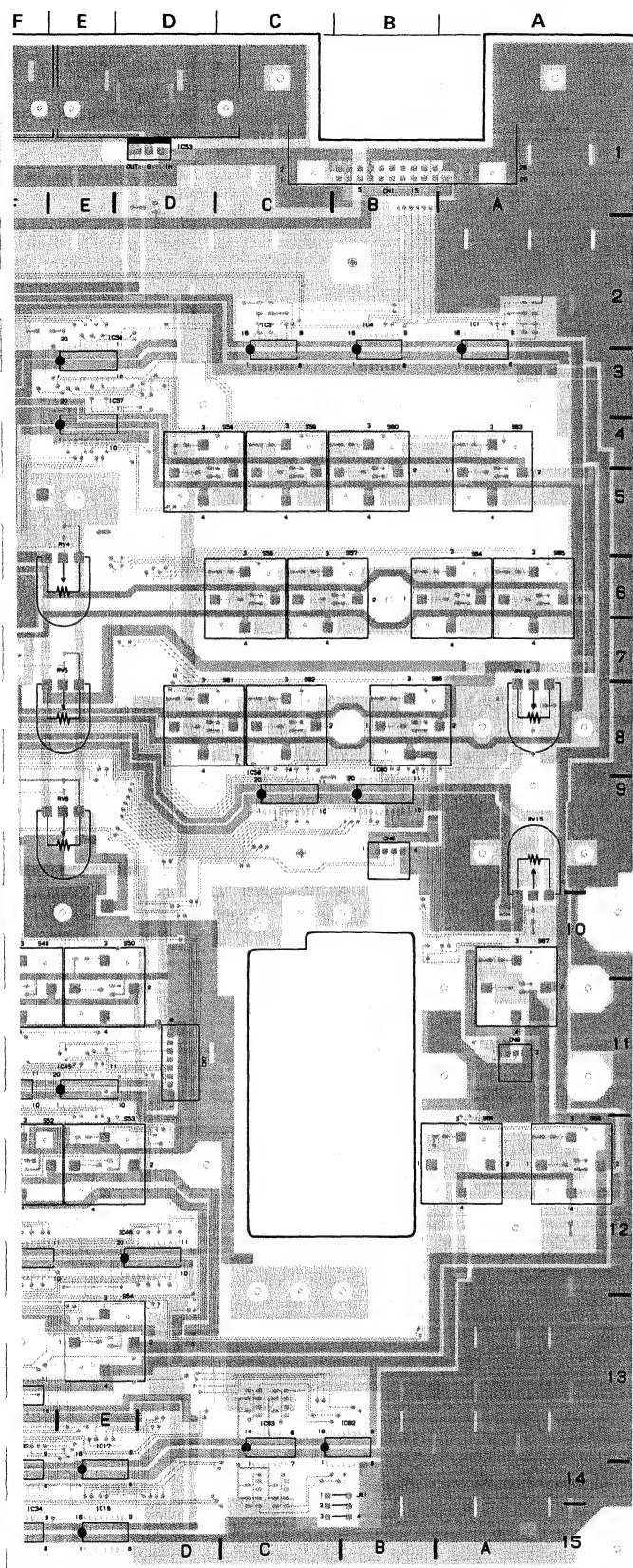
KY-155/155P (1-631-548-11)

BZ1	R - 2	IC62	B - 13	RV8	Q - 8
CN1	B - 1	IC63	D - 13	RV9	Q - 9
CN2	N - 1	IC64	F - 13	RV10	S - 9
CN3	M - 1	Q1	M - 6 (B)	RV12	S - 5
CN6	B - 9	Q2	M - 6 (B)	RV13	Q - 5
CN7	D - 11	Q3	L - 6 (B)	RV14	R - 6
CN8	G - 3	Q4	K - 6 (B)	RV15	A - 9
CN9	A - 11	Q9	K - 8 (B)	RV16	A - 8
		Q10	N - 8 (B)		
D1	J - 1 (B)	Q11	M - 8 (B)	S1	M - 6
D4	G - 1 (B)	Q12	M - 8 (B)	S2	M - 6
D5	F - 1 (B)	Q13	K - 8 (B)	S3	L - 6
D6	D - 1 (B)	Q14	S - 8 (B)	S4	K - 6
D9	S - 14 (B)	Q15	N - 5 (B)	S5	K - 8
D10	R - 1 (B)	Q16	M - 5 (B)	S6	N - 8
D11	Q - 1 (B)	Q17	L - 5 (B)	S7	M - 8
D12	M - 3 (B)	Q18	K - 5 (B)	S8	M - 8
D13	C - 13 (B)	Q19	L - 9 (B)	S9	K - 8
D14	C - 13 (B)	Q20	K - 9 (B)	S10	S - 8
D15	C - 14 (B)	Q21	S - 11 (B)	S11	G - 9
D16	C - 14 (B)	Q22	R - 11 (B)	S12	N - 4
		Q23	Q - 11 (B)	S13	M - 4
IC1	A - 2	Q24	P - 11 (B)	S14	L - 4
IC2	M - 3	Q25	N - 11 (B)	S15	K - 4
IC3	C - 2	Q26	M - 11 (B)	S16	L - 9
IC4	B - 2	Q27	M - 11 (B)	S17	K - 9
IC5	S - 13	Q28	L - 11 (B)	S18	S - 10
IC6	N - 15	Q29	K - 11 (B)	S19	R - 10
IC7	Q - 13	Q30	J - 11 (B)	S20	Q - 10
IC8	P - 13	Q31	S - 12 (B)	S21	P - 10
IC9	Q - 15	Q32	R - 12 (B)	S22	N - 10
IC10	P - 15	Q33	Q - 12 (B)	S23	M - 10
IC11	J - 14	Q34	P - 12 (B)	S24	L - 10
IC12	L - 14	Q35	N - 12 (B)	S25	K - 10
IC13	P - 3	Q36	M - 12 (B)	S26	K - 10
IC14	M - 3	Q37	M - 12 (B)	S27	H - 10
IC15	N - 13	Q38	L - 12 (B)	S28	S - 12
IC16	K - 13	Q39	K - 12 (B)	S29	R - 12
IC17	E - 13	Q40	J - 12 (B)	S30	Q - 12
IC18	E - 15	Q41	S - 13 (B)	S31	P - 12
IC19	L - 13	Q42	R - 13 (B)	S32	N - 12
IC20	K - 14	Q43	Q - 13 (B)	S33	M - 12
IC21	Q - 7	Q44	P - 13 (B)	S34	M - 12
IC22	Q - 6	Q45	N - 13 (B)	S35	L - 12
IC23	P - 8	Q46	M - 13 (B)	S36	K - 12
IC24	P - 9	Q47	M - 13 (B)	S37	H - 12
IC25	L - 10	Q48	L - 13 (B)	S38	S - 13
IC26	R - 10	Q49	K - 13 (B)	S39	R - 13
IC27	Q - 10	Q50	J - 13 (B)	S40	Q - 13
IC28	P - 10	Q51	G - 11 (B)	S41	P - 13
IC29	M - 10	Q52	F - 11 (B)	S42	N - 13
IC30	Q - 11	Q53	E - 11 (B)	S43	M - 13
IC31	P - 11	Q54	G - 12 (B)	S44	L - 13
IC32	M - 11	Q55	F - 12 (B)	S45	K - 13
IC33	F - 13	Q56	E - 12 (B)	S46	K - 13
IC34	F - 15	Q57	E - 13 (B)	S47	J - 13
IC35	S - 12	Q64	C - 6 (B)	S48	G - 10
IC36	Q - 12	Q65	C - 6 (B)	S49	F - 10
IC37	P - 12	Q66	D - 5 (B)	S50	D - 10
IC38	M - 12	Q67	C - 5 (B)	S51	G - 12
IC39	J - 12	Q68	B - 5 (B)	S52	F - 12
IC40	M - 10	Q69	D - 8 (B)	S53	D - 12
IC41	K - 11	Q70	C - 8 (B)	S54	D - 13
IC42	K - 12	Q71	A - 5 (B)	S55	G - 13
IC43	G - 11	Q72	B - 6 (B)	S56	C - 6
IC44	G - 12	Q73	A - 6 (B)	S57	B - 6
IC45	E - 11	Q74	B - 8 (B)	S58	C - 4
IC46	D - 12	Q75	A - 11 (B)	S59	C - 4
IC47	F - 12	Q76	A - 12 (B)	S60	B - 4
IC48	G - 15	Q78	J - 11 (B)	S61	C - 8
IC49	H - 13	Q79	J - 11 (B)	S62	C - 8
IC50	G - 13	Q80	K - 11 (B)	S63	A - 4
IC51	J - 1 (B)	Q81	K - 11 (B)	S64	A - 5
IC52	F - 1 (B)	Q82	L - 12 (B)	S65	A - 5
IC53	D - 1 (B)	Q83	K - 12 (B)	S66	B - 8
IC54	S - 11			S67	A - 10
IC55	M - 13	RV1	H - 5	S68	A - 11
IC56	G - 7	RV2	H - 8	S69	A - 11
IC57	G - 3	RV3	H - 9		
IC58	D - 2	RV4	E - 5	X1	S - 15
IC59	C - 8	RV5	E - 8	X2	K - 15
IC60	B - 8	RV6	E - 9		
IC61	G - 8	RV7	H - 4		

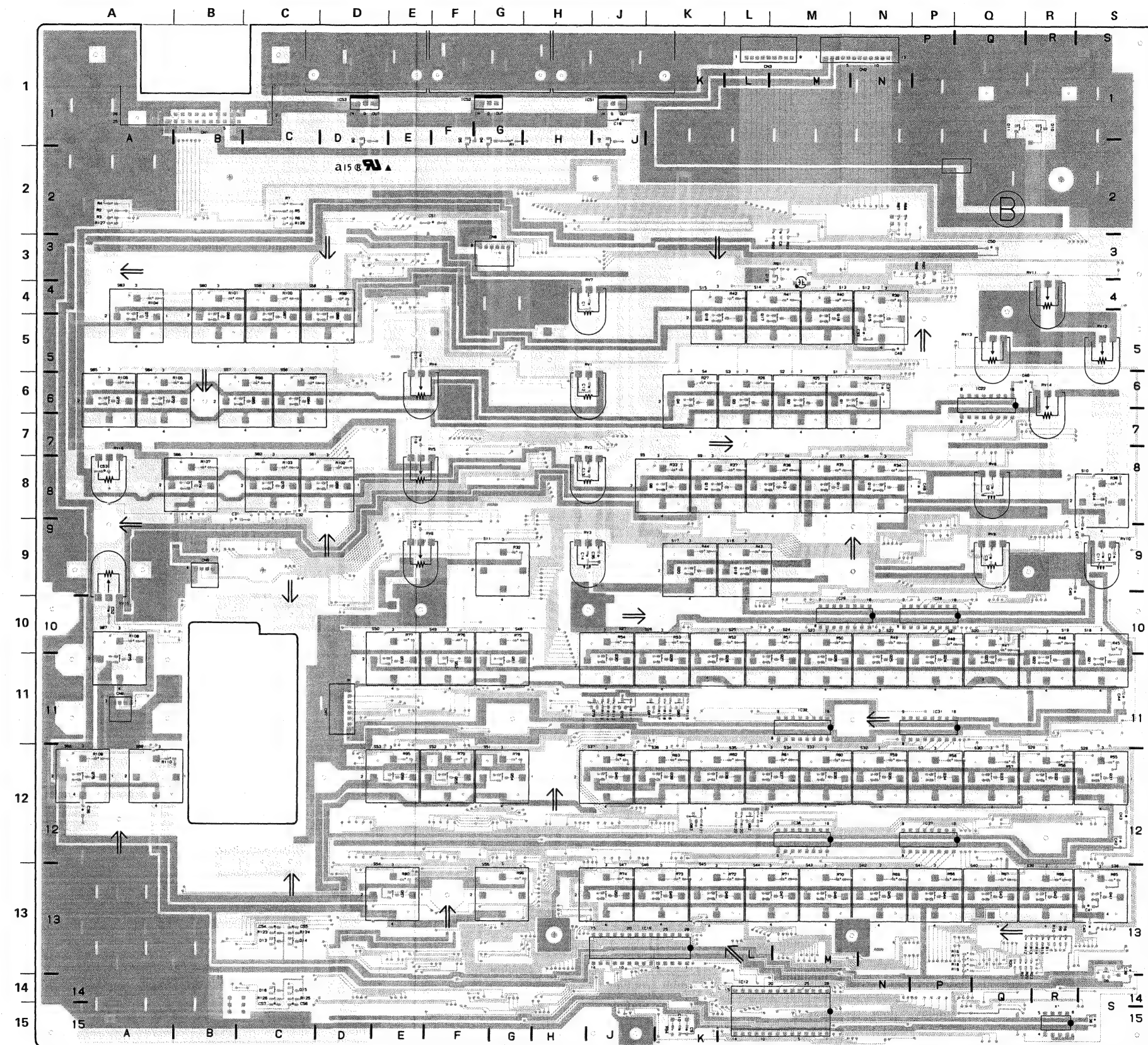
NOTE  
 \* - \* : \* - \* A SIDE  
 \* - \* (B) : \* - \* B SIDE





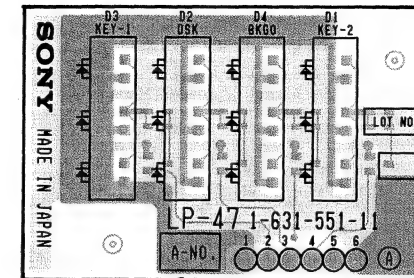


KY-155 -A SIDE-  
1-631-548-11 (1)  
BVS-3200/3200C  
BVS-3200P/3200CP

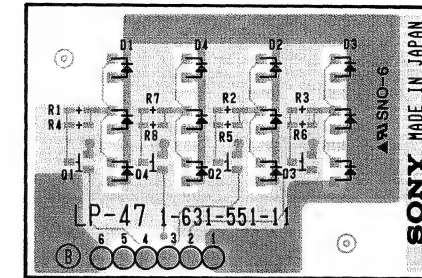


KY-155 -B SIDE-  
1-631-548-11 (1)  
BVS-3200/3200C  
BVS-3200P/3200CP

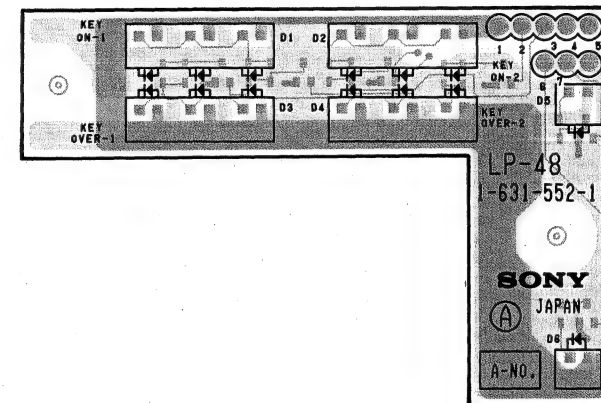
LP-47; LED  
LP-48; LED  
LP-49; LED



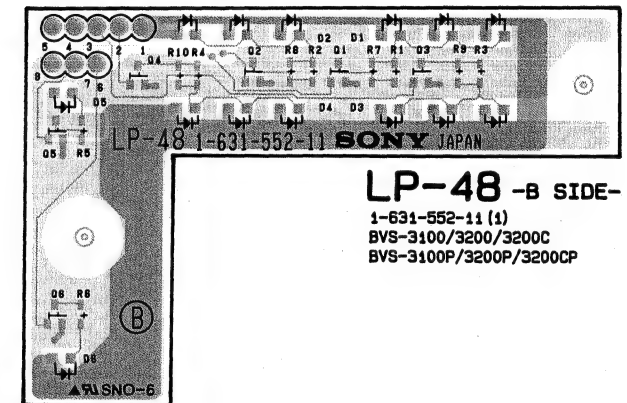
**LP-47 -A SIDE-**  
1-631-551-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



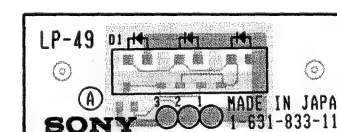
**LP-47 -B SIDE-**  
1-631-551-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



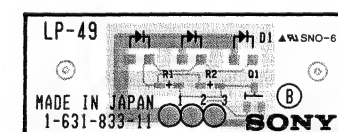
**LP-48 -A SIDE-**  
1-631-552-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



**LP-48 -B SIDE-**  
1-631-552-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



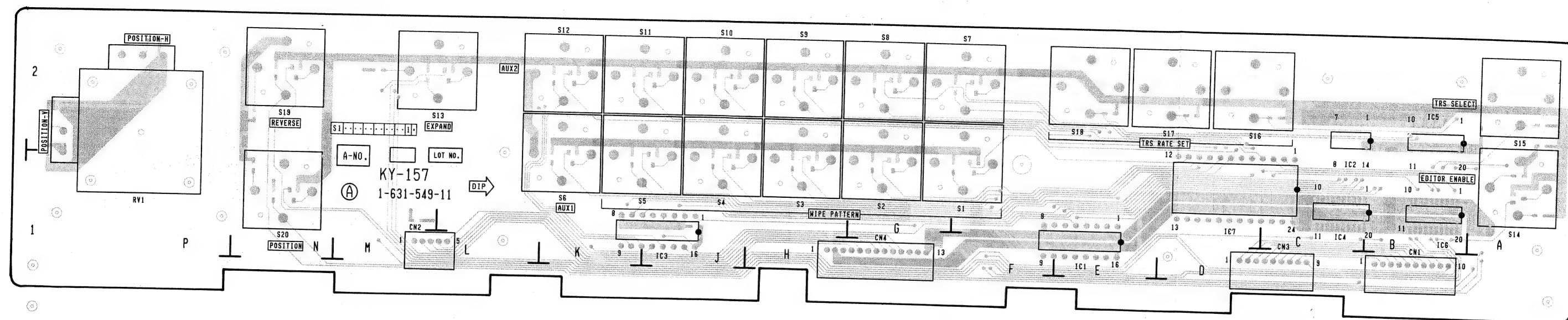
**LP-49 -A SIDE-**  
1-631-833-11 (1)  
BVS-3200C  
BVS-3200CP



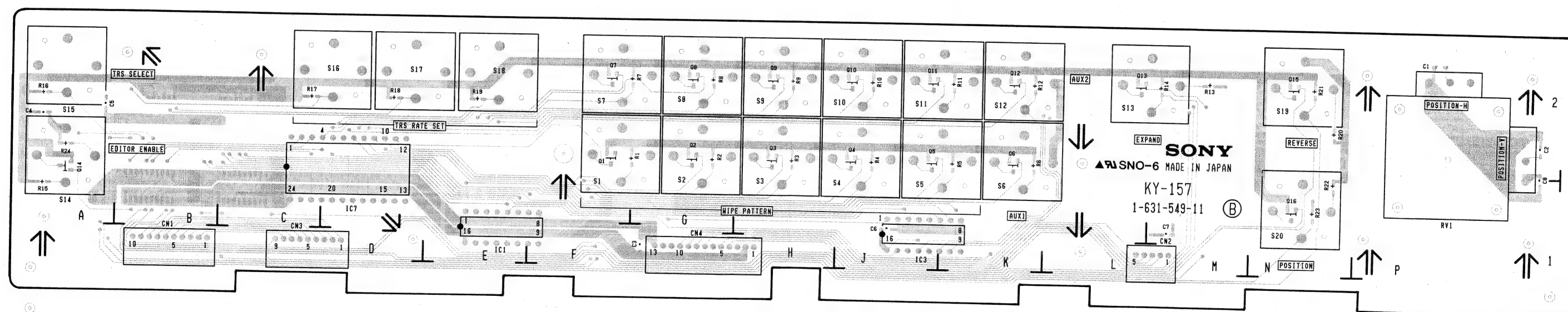
**LP-49 -B SIDE-**  
1-631-833-11 (1)  
BVS-3200C  
BVS-3200CP



KY-157; SUB SWITCH BOARD

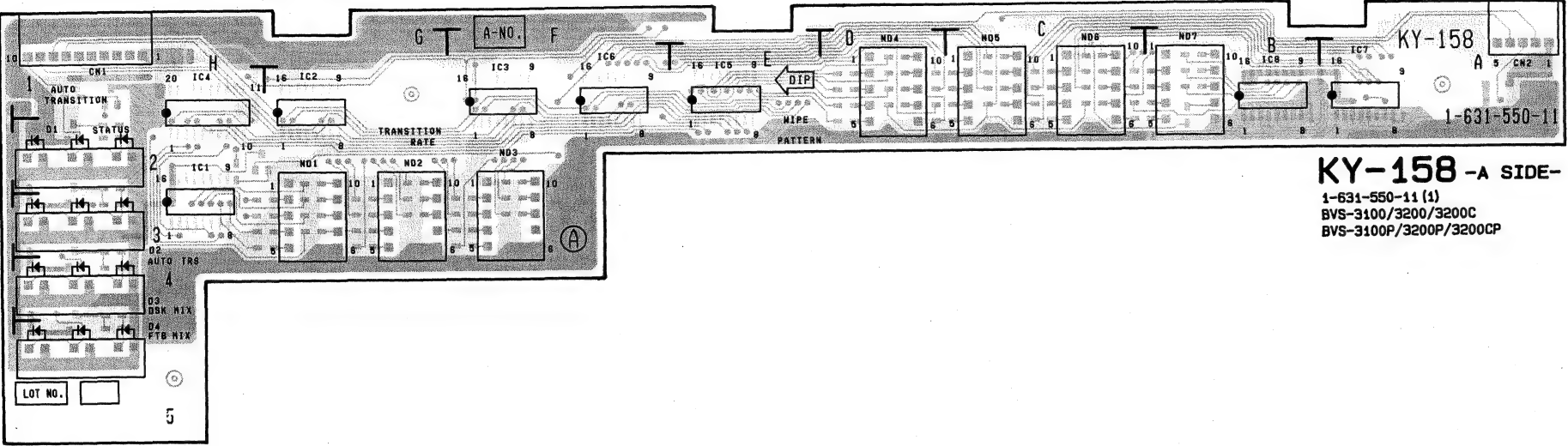


**KY-157 -A SIDE-**  
1-631-549-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP

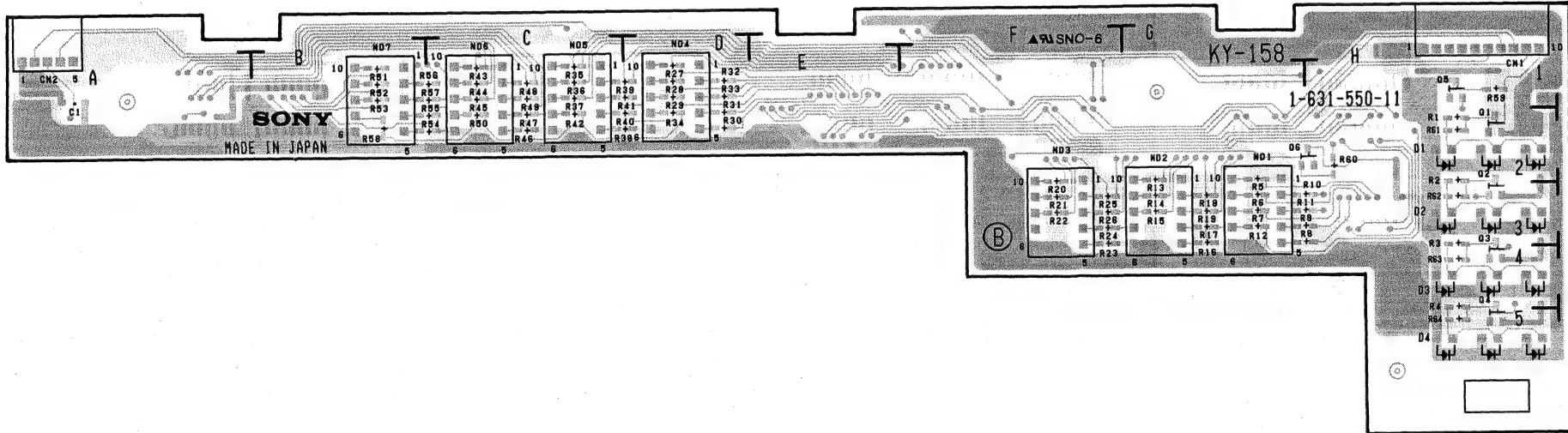


**KY-157 -B SIDE-**  
1-631-549-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP

KY-158; SUB SWITCH BOARD

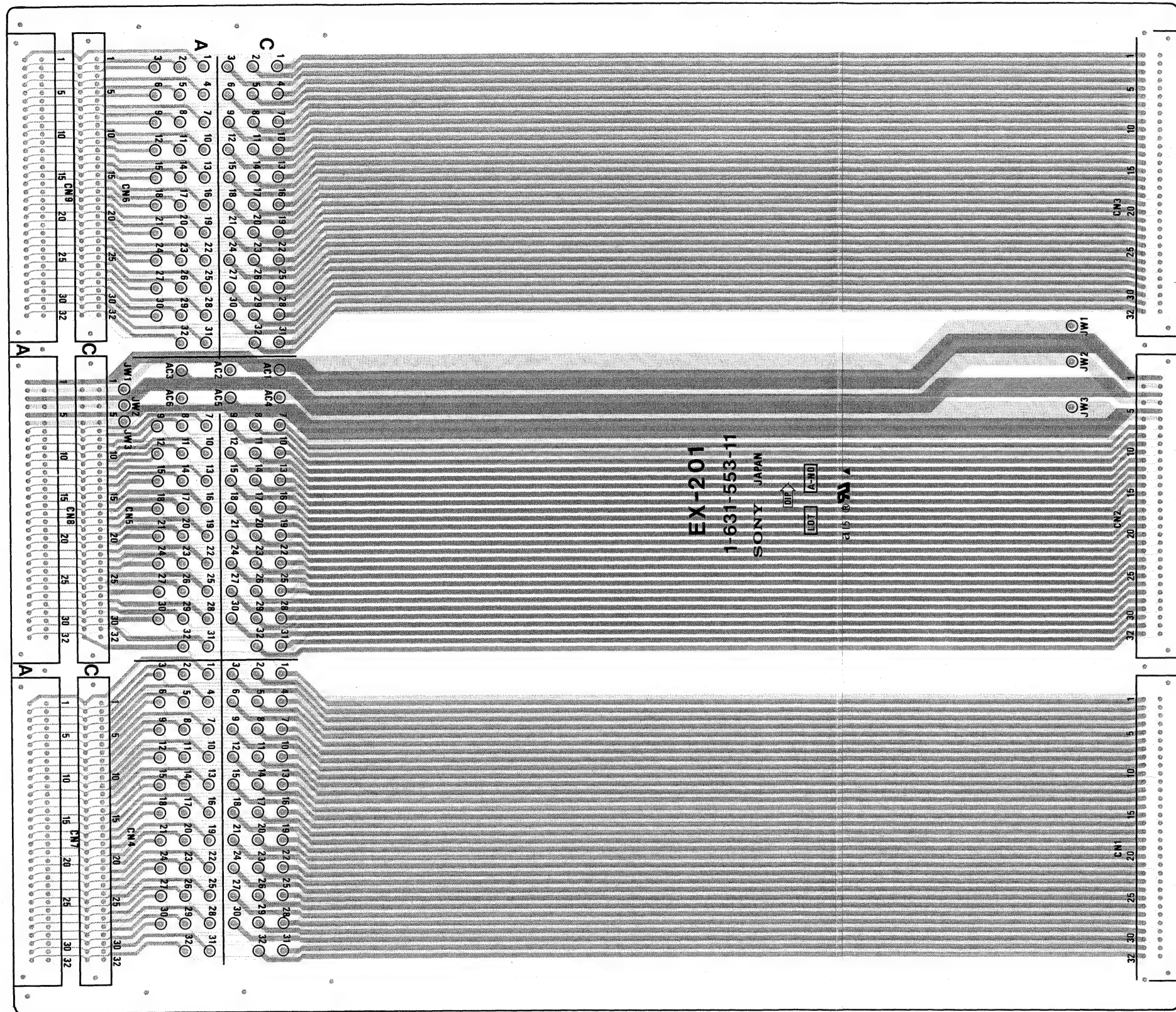


**KY-158 -A SIDE-**  
1-631-550-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP



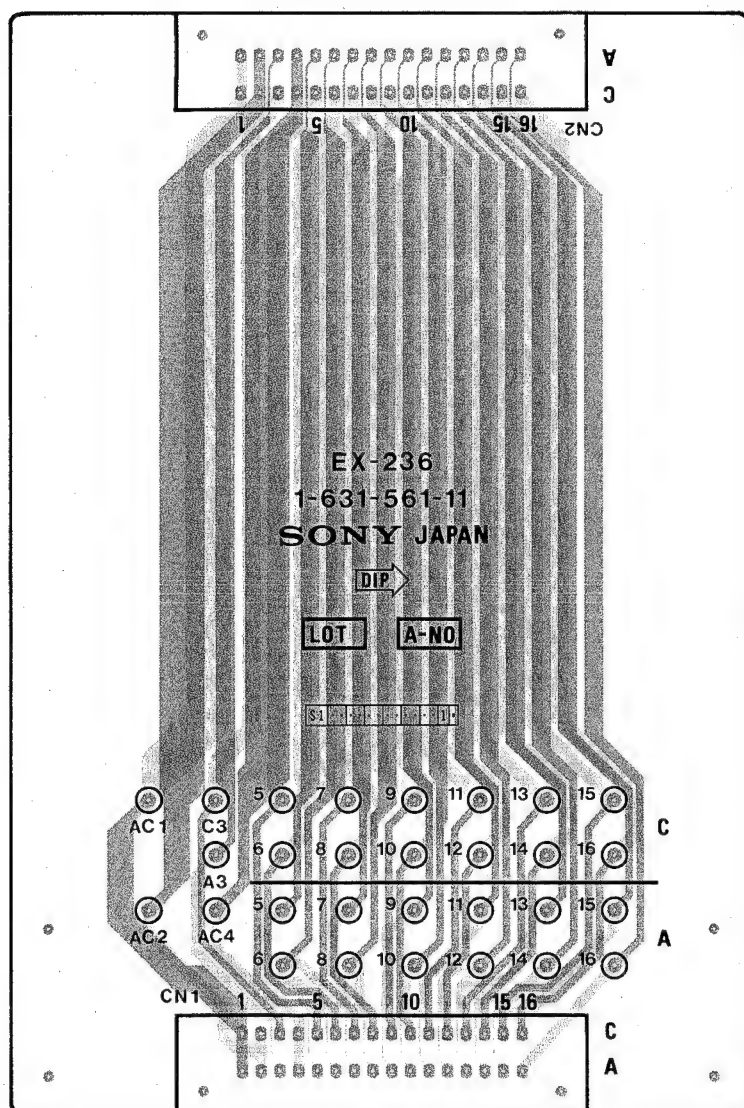
**KY-158 -B SIDE-**  
1-631-550-11 (1)  
BVS-3100/3200/3200C  
BVS-3100P/3200P/3200CP

EX-201; EXTENTION BOARD





## EX-236; EXTENTION BOARD




**EX-236** -COMPONENT SIDE-  
1-631-561-11 (1)  
BVS-3200C  
BVS-3200CP



## SECTION 9

### SPARE PARTS AND FIXTURE

#### 9-1. PARTS INFORMATION

- (1) The shaded and  -marked components are critical to safety.  
Replace only with the same components as specified.

- (2) Replacement parts supplied from the Sony Parts Center will sometimes have a different shape and outside view from the parts which are used in the unit. This is due to "accommodating improved parts and/or engineering changes" or "standardization of genuine parts".  
This manual's exploded views and electrical spare parts lists indicate the part numbers of "the present standardized genuine parts".  
Regarding engineering part changes by our engineering department, refer to Sony service bulletins and service manual supplements.
- (3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.
- (4) Item with no part number and/or no description are not stocked because they are seldom required for routine service.
- (5) ( T) after a spring description is shown on the exploded views in order to indicate the number of a spring turn required for the use.  
(Example)  
Spring, tension (24T); This spring must be cut at its 24th turn for actual use.

#### 9-2. EXPLODED VIEW

- Exploded views are composed of the following blocks

##### PROCESS UNIT

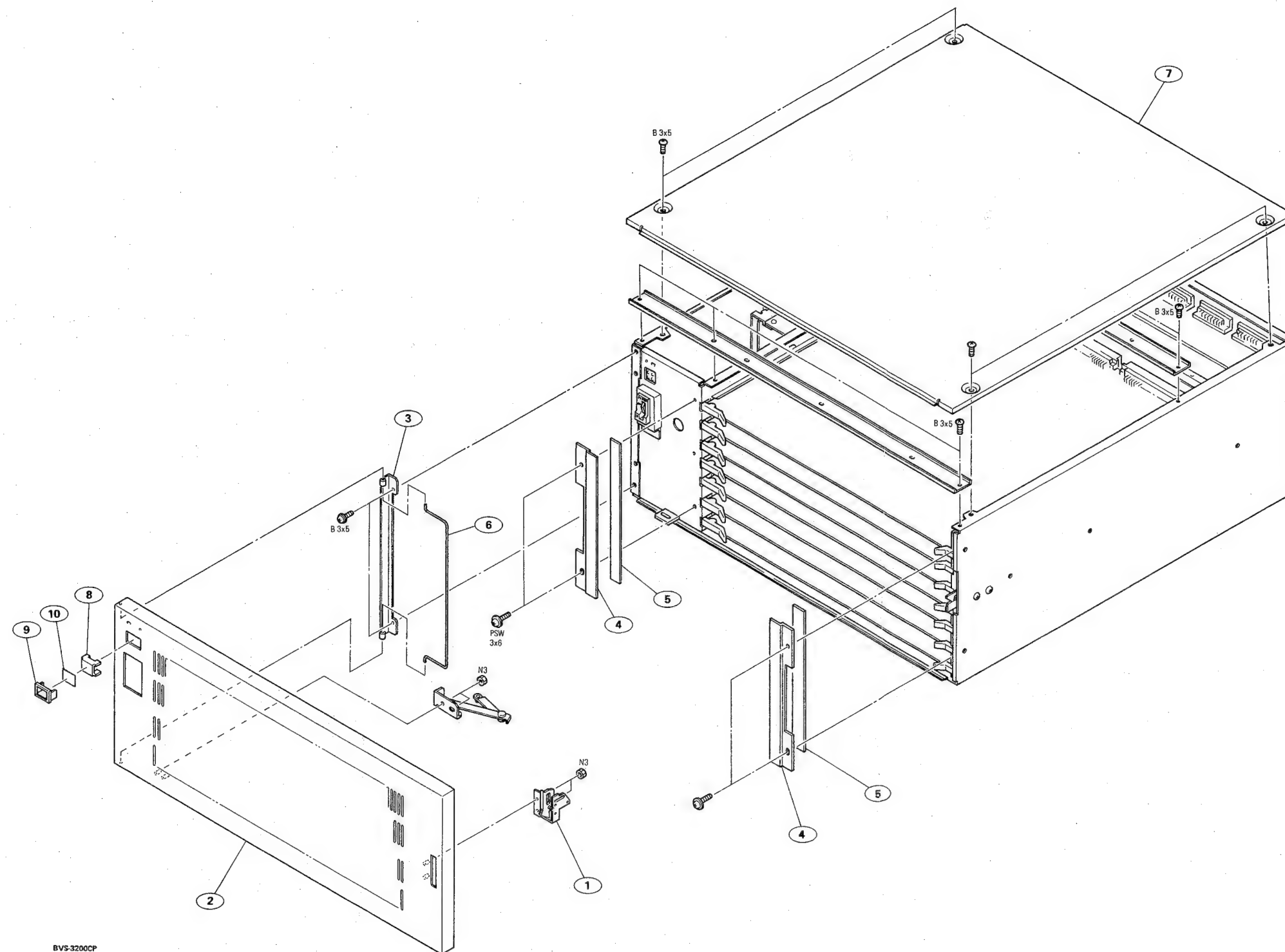
- (1) Front Panel
- (2) Chassis
- (3) Rear Panel

##### CONSOLE UNIT

- (1) Console Unit
- (2) Key Switch

FRONT PANEL FRONT PANEL

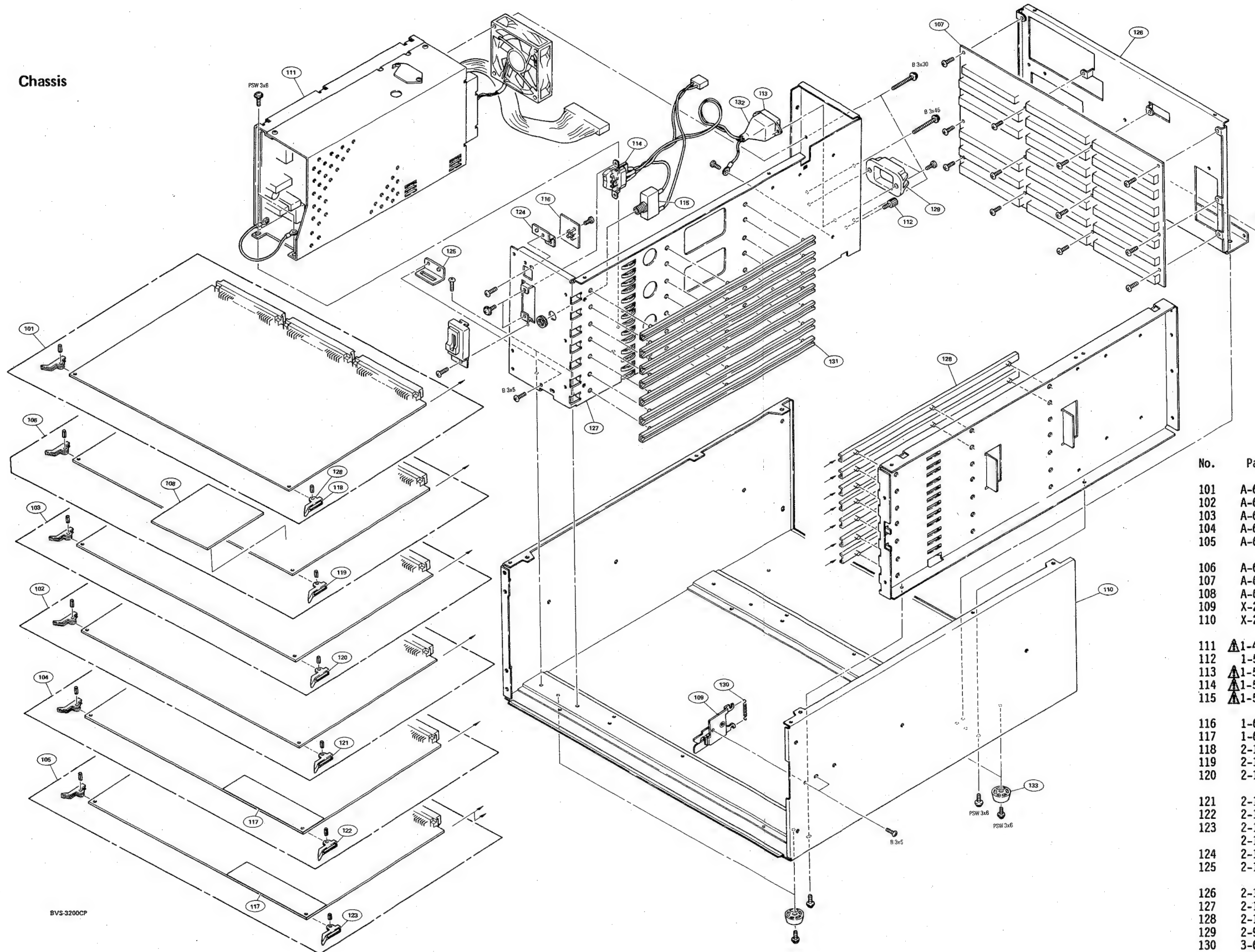
Front Panel



BVS-3200CP

No.	Part No	SP Description
1	A-6279-484-A	o HANDLE ASSY, DOOR
2	X-2127-233-1	o PLATE ASSY, FRONT
3	2-139-101-01	o SHAFT (4U), HINGE
4	2-139-110-01	o RETAINER, PC BOARD
5	2-139-111-01	o CUSHION, PC BOARD
6	2-139-127-01	o HINGE(4U)
7	2-139-153-01	o PLATE (D450), TOP
8	2-249-303-01	o WINDOW(2), REMOTE CONTROL
9	2-249-304-02	o FRAME(2), WINDOW, REMOTE CONTROL
10	2-249-353-01	o COVER, LAMP

Chassis



BVS-3200CP

No.	Part No	SP Description
101	A-6257-248-A	o MOUNTED CIRCUIT BOARD, WP-27
102	A-6257-250-A	o MOUNTED CIRCUIT BOARD, SD-20
103	A-6257-252-A	o MOUNTED CIRCUIT BOARD, SD-19
104	A-6257-254-A	o MOUNTED CIRCUIT BOARD, EF-20
105	A-6257-256-A	o MOUNTED CIRCUIT BOARD, EF-20C
106	A-6259-371-A	o MOUNTED CIRCUIT BOARD, SY-138
107	A-6265-120-A	o MOUNTED CIRCUIT BOARD, HN-105
108	A-6268-376-A	o MOUNTED CIRCUIT BOARD, SY-154
109	X-2127-216-1	o LOCK ASSY, DOOR
110	X-2127-225-1	o CHASSIS (4U) ASSY
111	Δ1-413-467-11	s REGULATOR, SWITCHING(SOPS-1007)
112	1-535-324-11	o TERMINAL, FASTEN
113	Δ1-560-222-11	s INLET 3P
114	Δ1-570-117-11	s SWITCH, SEESAW(AC POWER)
115	Δ1-576-036-11	s BREAKER, CIRCUIT
116	1-620-338-11	o PC BOARD, LE-55
117	1-632-548-11	o PC BOARD, DUS-312
118	2-139-103-01	o LABEL(2), PC BOARD NAME
119	2-139-103-11	o LABEL(2), PC BOARD NAME
120	2-139-103-21	o LABEL(2), PC BOARD NAME
121	2-139-103-31	o LABEL(2), PC BOARD NAME
122	2-139-103-41	o LABEL(2), PC BOARD NAME
123	2-139-104-01	o LABEL(3), PC BOARD NAME (R-Y)
	2-139-104-11	o LABEL(3), PC BOARD NAME (B-Y)
124	2-139-108-01	o BRACKET, LED
125	2-139-109-01	o TABLE (R), STOPPER
126	2-139-148-01	o BRACKET (A), MOTHER
127	2-139-160-02	o CHASSIS (4U), POWER
128	2-182-909-02	o LEVER, PC BOARD
129	2-990-241-01	o HOLDER (A), PLUG
130	3-655-252-01	s SPRING, TENSION
131	3-673-676-32	o RAIL, PC BOARD GUIDE
132	4-601-466-11	s COVER, 3P INLET
133	4-906-391-01	o FOOT
134	1-541-524-11	s MOTER, DC FAN

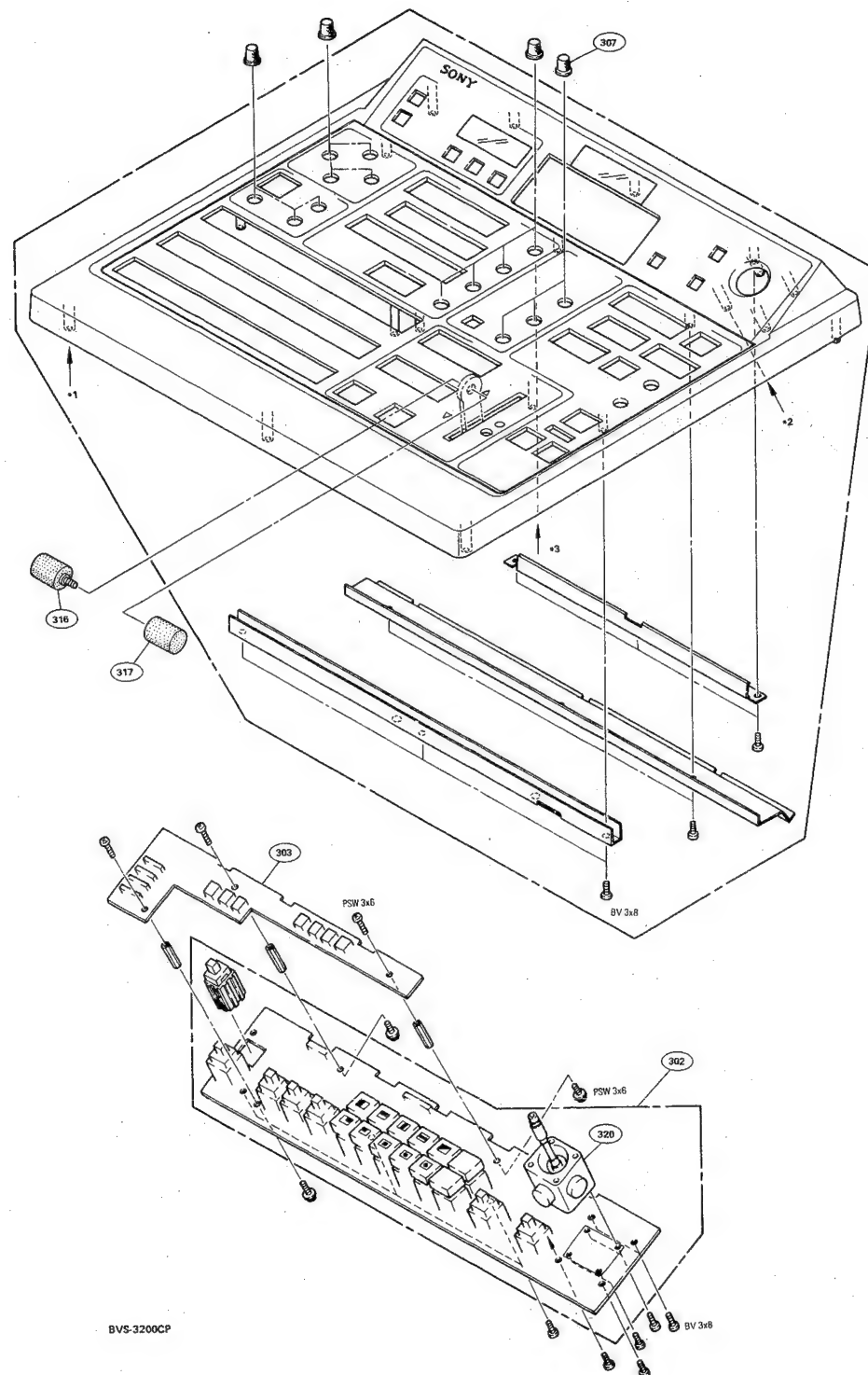
## REAR PANEL

## Rear Panel

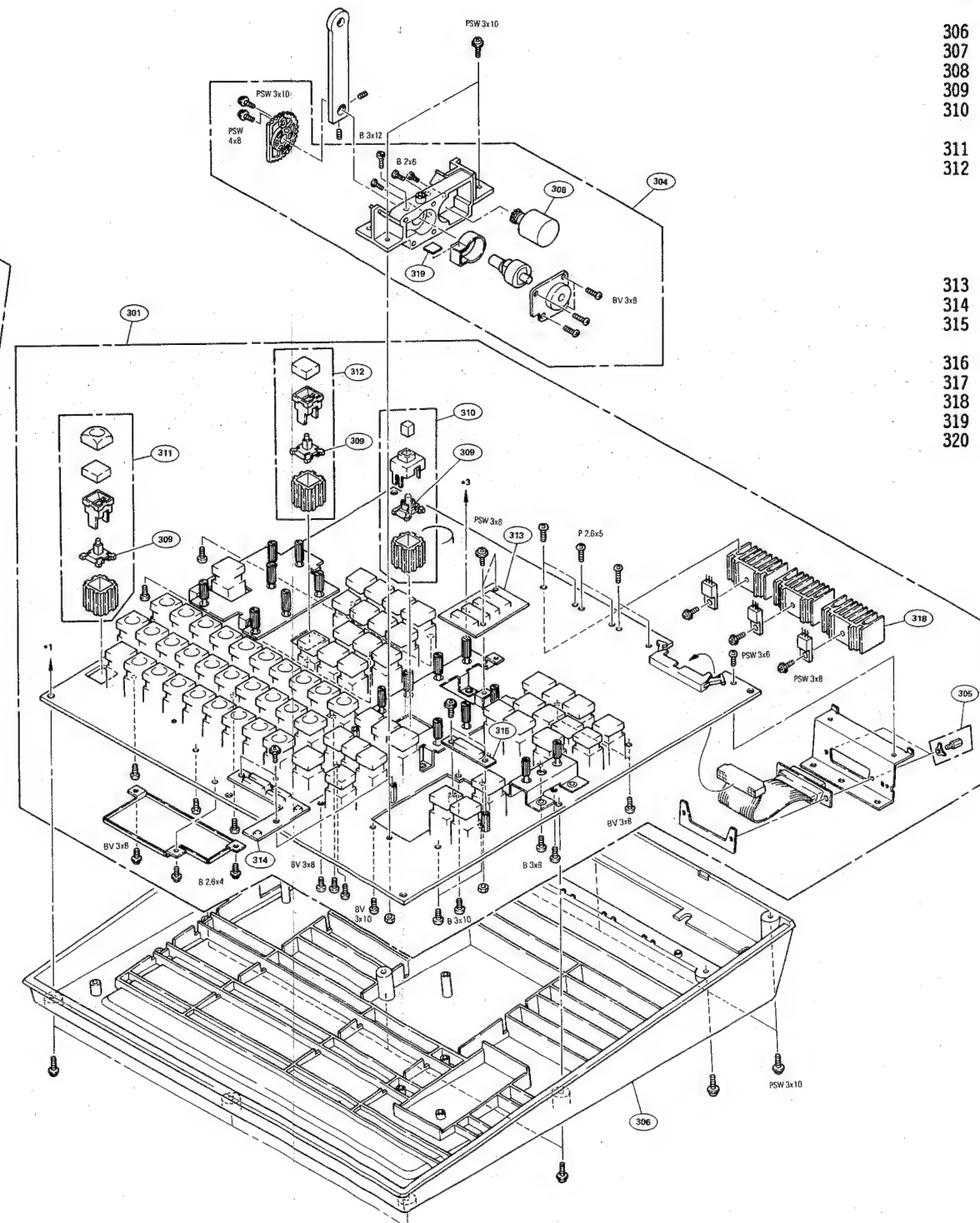


No.	Part No	SP Description
201	A-6257-258-A	o MOUNTED CIRCUIT BOARD, IV-25
202	A-6257-260-A	o MOUNTED CIRCUIT BOARD, EN-80
203	A-6257-262-A	o MOUNTED CIRCUIT BOARD, CN-333
204	A-6257-263-A	s MOUNTED CIRCUIT BOARD, CN-332
205	A-6257-264-A	o MOUNTED CIRCUIT BOARD, CN-336
206	A-6257-265-A	o MOUNTED CIRCUIT BOARD, CN-330
207	A-6265-121-A	o MOUNTED CIRCUIT BOARD, HN-138
208	X-2068-004-1	s TERMINAL ASSY
209	1-563-354-12	s CONNECTOR, BNC
210	2-139-112-01	o PANEL (C), REAR
211	2-139-113-01	o PANEL (D), REAR
212	2-139-125-01	o BRACKET (C), BNC
213	2-139-126-01	o PANEL, REAR, IV
214	2-139-128-01	o PANEL, (B), REAR
215	2-139-138-01	o PANEL (A), REAR
216	2-139-149-01	o BRACKET (B), MOTHER
217	3-653-564-02	s SCREW, COIN
218	3-673-676-01	o RAIL, GUIDE, CHASSIS

Console Unit



BVS-3200CP



No.	Part No	SP Description
301	A-6259-373-A	o MOUNTED CIRCUIT BOARD, KY-155
302	A-6259-374-A	o MOUNTED CIRCUIT BOARD, KY-157
303	A-6259-375-A	o MOUNTED CIRCUIT BOARD, KY-158
304	A-6279-486-A	s FADER ASSY
305	X-2068-004-1	s TERMINAL ASSY
306	X-2127-242-1	o COVER ASSY, LOWER
307	X-3668-075-1	s KNOB ASSY, CONTROL
308	1-466-182-11	s ENCODER, ROTARY (MAGNETIC)
309	1-518-659-11	s PILOT LAMP
310	1-572-031-11	s SWITCH, PUSH (1 KEY)
311	1-572-032-	s SWITCH, PUSH (1 KEY)
312	1-572-033-	s SWITCH, PUSH (1 KEY)
	1-572-034-	s SWITCH, PUSH (1 KEY)
	1-572-035-	s SWITCH, PUSH (1 KEY)
	1-572-036-	s SWITCH, PUSH (1 KEY)
	1-572-037-	s SWITCH, PUSH (1 KEY)
	1-572-038-	s SWITCH, PUSH (1 KEY)
313	1-631-551-11	o PC BOARD, LP-47
314	1-631-552-11	o PC BOARD, LP-48
315	1-631-833-11	o PC BOARD, LP-49
316	2-139-115-01	o GRIP (B), FADER
317	2-139-116-01	o GRIP (A), FADER
318	2-139-131-01	o HEAT SINK, CON.
319	2-139-171-01	s SPACER (F)
320	2-139-172-01	s LEVER, FOG



## KEY SWITCH

## WHITE

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
	s	1-572-032-11	s	3-707-668-01
<b>BLACK</b>	s	1-572-032-21	s	3-707-668-11
<b>COLOR BKGD</b>	s	1-572-032-31	s	3-707-668-21

## YELLOW











	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
	s	1-572-032-41	s	3-707-668-31
<b>BLACK</b>	s	1-572-032-51	s	3-707-668-41
<b>COLOR BKGD</b>	s	1-572-032-61	s	3-707-668-51

## ORANGE

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
	s	1-572-032-71	s	3-707-668-61
<b>BLACK</b>	s	1-572-032-81	s	3-707-668-71
<b>COLOR BKGD</b>	s	1-572-032-91	s	3-707-668-81

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
<b>EXT VIDEO</b>	s	1-572-033-11	s	3-707-669-01
<b>DSK MATTE</b>	s	1-572-033-21	s	3-707-669-11
<b>BORDER LINE</b>	s	1-572-033-31	s	3-707-669-21
<b>DROP SHADOW</b>	s	1-572-033-41	s	3-707-669-31
<b>OUT LINE</b>	s	1-572-033-51	s	3-707-669-41
<b>DSK EXT</b>	s	1-572-033-61	s	3-707-669-51
<b>KEY BUS</b>	s	1-572-033-71	s	3-707-669-61
<b>LINE 411</b>	s	1-572-033-81	s	3-707-669-71
<b>MASK</b>	s	1-572-033-91	s	3-707-669-81
<b>KEY INVERT</b>	s	1-572-034-11	s	3-707-669-91
<b>DSK PVW</b>	s	1-572-034-21	s	3-707-670-01
<b>ASPECT ON</b>	s	1-572-034-31	s	3-707-670-11
<b>AUX 1</b>	s	1-572-034-41	s	3-707-670-21

# KEY SWITCH

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
AUX 2	s	1-572-034-51	s	3-707-670-31
DSK CUT	s	1-572-034-61	s	3-707-670-41
DSK MIX	s	1-572-034-71	s	3-707-670-51
1 	s	1-572-034-81	s	3-707-670-61
3 	s	1-572-034-91	s	3-707-670-71
17 	s	1-572-035-11	s	3-707-670-81
18 	s	1-572-035-21	s	3-707-670-91
9 	s	1-572-035-31	s	3-707-671-01
6 	s	1-572-035-41	s	3-707-671-11
5 	s	1-572-035-51	s	3-707-671-21
21 	s	1-572-035-61	s	3-707-671-31
24 	s	1-572-035-71	s	3-707-671-41
23 	s	1-572-035-81	s	3-707-671-51

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
BKGD	s	1-572-035-91	s	3-707-671-61
KEY 1	s	1-572-036-11	s	3-707-671-71
KEY 2	s	1-572-036-21	s	3-707-671-81
KEY BUS	s	1-572-036-31	s	3-707-671-91
LIASK	s	1-572-036-41	s	3-707-672-01
KEY INVERT	s	1-572-036-51	s	3-707-672-11
EXT VIDEO 1	s	1-572-036-61	s	3-707-672-21
EXT VIDEO 2	s	1-572-036-71	s	3-707-672-31
EFF MATTE	s	1-572-036-81	s	3-707-672-41
PST PTN	s	1-572-036-91	s	3-707-672-51
EFF EXT 1	s	1-572-037-11	s	3-707-672-61
EFF EXT 2	s	1-572-037-21	s	3-707-672-71
CHROMA KEY	s	1-572-037-31	s	3-707-672-81

	KEY SWITCH		KEY TOP	
	SP	Parts No.	SP	Parts No.
<b>EXT MASK</b>	s	1-572-037-41	s	3-707-672-91
<b>MIX</b>	s	1-572-037-51	s	3-707-673-01
<b>WIPE</b>	s	1-572-037-61	s	3-707-673-11
<b>KEY OVER</b>	s	1-572-037-71	s	3-707-673-21
<b>KEY 1 SELECT</b>	s	1-572-037-81	s	3-707-673-31
<b>KEY 2 SELECT</b>	s	1-572-037-91	s	3-707-673-41
<b>EVE EFF</b>	s	1-572-038-11	s	3-707-673-51
<b>CUT</b>	s	1-572-038-21	s	3-707-673-61
<b>AUTO TRANS</b>	s	1-572-038-31	s	3-707-673-71
<b>FADE TO BLACK</b>	s	1-572-038-41	s	3-707-673-81
<b>KEY</b>	s	1-572-080-11	s	3-707-729-01
<b>DME</b>	s	1-572-081-11	s	3-707-730-01

### 9-3. ELECTRICAL PARTS LIST

#### ABBREVIATIONS

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
C□□, CT□□	CAPACITOR	IC□□	IC	Q□□	TRANSISTOR
CF□□	CERAMIC FILTER	J□□	JACK	R□□, RV□□	RESISTOR
CN□□	CONNECTOR	L□□	INDUCTOR	RY□□	RELAY
D□□	DIODE	M□□	MOTOR	S□□, SW□□	SWITCH
DL□□	DELAY LINE	ME□□	METER	SB□□	SOLAR BATTERY
F□□	FUSE	MIC□□	MICROPHONE	T□□	TRANSFORMER
FB□□	FERRITE BEAD	PG□□	PG COIL	TH□□	THERMISTOR
FL□□	FILTER	PL□□	LAMP	X□□	CRYSTAL
H□□	HEAD	PM□□	SOLENOIDE		

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

# ----- General Purpose Electrical Parts List -----

Parts that are not listed in the "reference numbers order list" are shown in following list.  
Reference numbers are omitted.

## ----- CAPACITOR, CHIP CERAMIC -----

Part No. SP Description

1-163-083-00	s	CAP, CHIP CERAMIC	1pF	+-0.25pF	50V
1-163-085-00	s	CAP, CHIP CERAMIC	2pF	+-0.25pF	50V
1-163-087-00	s	CAP, CHIP CERAMIC	4pF	+-0.25pF	50V
1-163-089-00	s	CAP, CHIP CERAMIC	6pF	+-0.5pF	50V
1-163-091-00	s	CAP, CHIP CERAMIC	8pF	+-0.5pF	50V
1-163-093-00	s	CAP, CHIP CERAMIC	10pF	5%	50V
1-163-097-00	s	CAP, CHIP CERAMIC	15pF	5%	50V
1-163-101-00	s	CAP, CHIP CERAMIC	22pF	5%	50V
1-163-105-00	s	CAP, CHIP CERAMIC	33pF	5%	50V
1-163-109-00	s	CAP, CHIP CERAMIC	47pF	5%	50V
1-163-113-00	s	CAP, CHIP CERAMIC	68pF	5%	50V
1-163-117-00	s	CAP, CHIP CERAMIC	100pF	5%	50V
1-163-121-00	s	CAP, CHIP CERAMIC	150pF	5%	50V
1-163-125-00	s	CAP, CHIP CERAMIC	220pF	5%	50V
1-163-129-00	s	CAP, CHIP CERAMIC	330pF	5%	50V
1-163-133-00	s	CAP, CHIP CERAMIC	470pF	5%	50V
1-163-137-00	s	CAP, CHIP CERAMIC	680pF	5%	50V
1-163-141-00	s	CAP, CHIP CERAMIC	1000pF	5%	50V
1-163-145-00	s	CAP, CHIP CERAMIC	1500pF	10%	50V
1-163-013-00	s	CAP, CHIP CERAMIC	2200pF	10%	50V
1-163-015-00	s	CAP, CHIP CERAMIC	3300pF	10%	50V
1-163-017-00	s	CAP, CHIP CERAMIC	4700pF	10%	50V
1-163-019-00	s	CAP, CHIP CERAMIC	6800pF	10%	50V
1-163-021-00	s	CAP, CHIP CERAMIC	0.01	10%	50V
1-163-023-00	s	CAP, CHIP CERAMIC	0.015	10%	50V
1-163-034-00	s	CAP, CHIP CERAMIC	0.033		50V
1-163-035-00	s	CAP, CHIP CERAMIC	0.047		50V
1-163-036-00	s	CAP, CHIP CERAMIC	0.068		50V
1-163-038-00	s	CAP, CHIP CERAMIC	0.1		50V

## ----- CAPACITOR, CHIP TANTALUM -----

Part No. SP Description

1-135-070-00	s	CAP, CHIP TANTALUM	0.1	10%	35V
1-135-071-21	s	CAP, CHIP TANTALUM	0.15	10%	35V
1-135-072-21	s	CAP, CHIP TANTALUM	0.22	10%	35V
1-135-073-00	s	CAP, CHIP TANTALUM	0.33	10%	35V
1-135-083-00	s	CAP, CHIP TANTALUM	0.47	10%	25V
1-135-074-21	s	CAP, CHIP TANTALUM	0.47	10%	35V
1-135-087-21	s	CAP, CHIP TANTALUM	0.68	10%	20V
1-135-075-21	s	CAP, CHIP TANTALUM	0.68	10%	35V
1-135-091-21	s	CAP, CHIP TANTALUM	1.0	10%	16V
1-135-076-21	s	CAP, CHIP TANTALUM	1.0	10%	35V
1-135-084-21	s	CAP, CHIP TANTALUM	1.5	10%	25V
1-135-077-21	s	CAP, CHIP TANTALUM	1.5	10%	35V
1-135-088-21	s	CAP, CHIP TANTALUM	2.2	10%	20V
1-135-078-21	s	CAP, CHIP TANTALUM	2.2	10%	35V
1-135-092-21	s	CAP, CHIP TANTALUM	3.3	10%	16V
1-135-079-21	s	CAP, CHIP TANTALUM	3.3	10%	35V
1-135-096-21	s	CAP, CHIP TANTALUM	4.7	10%	10V
1-135-085-21	s	CAP, CHIP TANTALUM	4.7	10%	25V
1-135-100-21	s	CAP, CHIP TANTALUM	6.8	10%	6.3V
1-135-089-21	s	CAP, CHIP TANTALUM	6.8	10%	20V
1-135-093-21	s	CAP, CHIP TANTALUM	10	10%	16V
1-135-097-21	s	CAP, CHIP TANTALUM	15	10%	10V
1-135-101-21	s	CAP, CHIP TANTALUM	22	10%	6.3V
1-135-098-21	s	CAP, CHIP TANTALUM	47	10%	6.3V



-----  
RESISTOR, CHIP METAL  
-----

Part No. SP Description

1-216-603-11 s RES, CHIP METAL 10 1% 1/10W  
1-216-605-11 s RES, CHIP METAL 12 1% 1/10W  
1-216-609-11 s RES, CHIP METAL 18 1% 1/10W  
1-216-611-11 s RES, CHIP METAL 22 1% 1/10W  
1-216-614-11 s RES, CHIP METAL 30 1% 1/10W

1-216-617-11 s RES, CHIP METAL 39 1% 1/10W  
1-216-619-11 s RES, CHIP METAL 47 1% 1/10W  
1-216-620-11 s RES, CHIP METAL 51 1% 1/10W  
1-216-623-11 s RES, CHIP METAL 68 1% 1/10W  
1-216-624-11 s RES, CHIP METAL 75 1% 1/10W

1-216-625-11 s RES, CHIP METAL 82 1% 1/10W  
1-216-626-11 s RES, CHIP METAL 91 1% 1/10W  
1-216-627-11 s RES, CHIP METAL 100 1% 1/10W  
1-216-629-11 s RES, CHIP METAL 120 1% 1/10W  
1-216-631-11 s RES, CHIP METAL 150 1% 1/10W

1-216-633-11 s RES, CHIP METAL 180 1% 1/10W  
1-216-634-11 s RES, CHIP METAL 200 1% 1/10W  
1-216-635-11 s RES, CHIP METAL 220 1% 1/10W  
1-216-636-11 s RES, CHIP METAL 240 1% 1/10W  
1-216-637-11 s RES, CHIP METAL 270 1% 1/10W

1-216-638-11 s RES, CHIP METAL 300 1% 1/10W  
1-216-639-11 s RES, CHIP METAL 330 1% 1/10W  
1-216-640-11 s RES, CHIP METAL 360 1% 1/10W  
1-216-641-11 s RES, CHIP METAL 390 1% 1/10W  
1-216-642-11 s RES, CHIP METAL 430 1% 1/10W

1-216-643-11 s RES, CHIP METAL 470 1% 1/10W  
1-216-644-11 s RES, CHIP METAL 510 1% 1/10W  
1-216-645-11 s RES, CHIP METAL 560 1% 1/10W  
1-216-647-11 s RES, CHIP METAL 680 1% 1/10W  
1-216-648-11 s RES, CHIP METAL 750 1% 1/10W

1-216-649-11 s RES, CHIP METAL 820 1% 1/10W  
1-216-650-11 s RES, CHIP METAL 910 1% 1/10W  
1-216-651-11 s RES, CHIP METAL 1.0k 1% 1/10W  
1-216-652-11 s RES, CHIP METAL 1.1k 1% 1/10W  
1-216-653-11 s RES, CHIP METAL 1.2k 1% 1/10W

1-216-655-11 s RES, CHIP METAL 1.5k 1% 1/10W  
1-216-656-11 s RES, CHIP METAL 1.6k 1% 1/10W  
1-216-657-11 s RES, CHIP METAL 1.8k 1% 1/10W  
1-216-658-11 s RES, CHIP METAL 2k 1% 1/10W  
1-216-659-11 s RES, CHIP METAL 2.2k 1% 1/10W

1-216-660-11 s RES, CHIP METAL 2.4k 1% 1/10W  
1-216-661-11 s RES, CHIP METAL 2.7k 1% 1/10W  
1-216-662-11 s RES, CHIP METAL 3k 1% 1/10W  
1-216-663-11 s RES, CHIP METAL 3.3k 1% 1/10W  
1-216-664-11 s RES, CHIP METAL 3.5k 1% 1/10W

1-216-665-11 s RES, CHIP METAL 3.9k 1% 1/10W  
1-216-666-11 s RES, CHIP METAL 4.3k 1% 1/10W  
1-216-667-11 s RES, CHIP METAL 4.7k 1% 1/10W  
1-216-668-11 s RES, CHIP METAL 5.1k 1% 1/10W  
1-216-669-11 s RES, CHIP METAL 5.6k 1% 1/10W

1-216-670-11 s RES, CHIP METAL 6.2k 1% 1/10W  
1-216-671-11 s RES, CHIP METAL 6.8k 1% 1/10W  
1-216-672-11 s RES, CHIP METAL 7.5k 1% 1/10W  
1-216-673-11 s RES, CHIP METAL 8.2k 1% 1/10W  
1-216-674-11 s RES, CHIP METAL 9.1k 1% 1/10W

1-216-675-11 s RES, CHIP METAL 10k 1% 1/10W  
1-216-676-11 s RES, CHIP METAL 11k 1% 1/10W  
1-216-677-11 s RES, CHIP METAL 12k 1% 1/10W  
1-216-678-11 s RES, CHIP METAL 13k 1% 1/10W  
1-216-679-11 s RES, CHIP METAL 15k 1% 1/10W

(RESISTOR, CHIP METAL)

Part No. SP Description

1-216-680-11 s RES, CHIP METAL 16k 1% 1/10W  
1-216-681-11 s RES, CHIP METAL 18k 1% 1/10W  
1-216-682-11 s RES, CHIP METAL 20k 1% 1/10W  
1-216-683-11 s RES, CHIP METAL 22k 1% 1/10W  
1-216-684-11 s RES, CHIP METAL 24k 1% 1/10W

1-216-685-11 s RES, CHIP METAL 27k 1% 1/10W  
1-216-686-11 s RES, CHIP METAL 30k 1% 1/10W  
1-216-687-11 s RES, CHIP METAL 33k 1% 1/10W  
1-216-688-11 s RES, CHIP METAL 36k 1% 1/10W  
1-216-689-11 s RES, CHIP METAL 39k 1% 1/10W

1-216-690-11 s RES, CHIP METAL 43k 1% 1/10W  
1-216-691-11 s RES, CHIP METAL 49k 1% 1/10W  
1-216-692-11 s RES, CHIP METAL 51k 1% 1/10W  
1-216-693-11 s RES, CHIP METAL 56k 1% 1/10W  
1-216-694-11 s RES, CHIP METAL 62k 1% 1/10W

1-216-695-11 s RES, CHIP METAL 68k 1% 1/10W  
1-216-696-11 s RES, CHIP METAL 75k 1% 1/10W  
1-216-697-11 s RES, CHIP METAL 82k 1% 1/10W  
1-216-698-11 s RES, CHIP METAL 91k 1% 1/10W  
1-216-699-11 s RES, CHIP METAL 100k 1% 1/10W

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INDUCTOR, MICRO  
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Part No. SP Description

1-408-876-00 s INDUCTOR, MICRO 0.18 5%  
1-408-877-00 s INDUCTOR, MICRO 0.22 5%  
1-408-878-00 s INDUCTOR, MICRO 0.33 5%  
1-408-879-21 s INDUCTOR, MICRO 0.47 5%  
1-408-931-00 s INDUCTOR, MICRO 0.56 5%

1-408-880-00 s INDUCTOR, MICRO 0.68 5%  
1-408-763-00 s INDUCTOR, MICRO 0.82 5%  
1-408-397-00 s INDUCTOR, MICRO 1.0 5%  
1-408-398-00 s INDUCTOR, MICRO 1.2 5%  
1-408-399-00 s INDUCTOR, MICRO 1.5 5%

1-408-400-00 s INDUCTOR, MICRO 1.8 5%  
1-408-401-00 s INDUCTOR, MICRO 2.2 5%  
1-408-402-00 s INDUCTOR, MICRO 2.7 5%  
1-408-403-00 s INDUCTOR, MICRO 3.3 5%  
1-408-404-00 s INDUCTOR, MICRO 3.9 5%

1-408-405-00 s INDUCTOR, MICRO 4.7 5%  
1-408-406-00 s INDUCTOR, MICRO 5.6 5%  
1-408-407-00 s INDUCTOR, MICRO 6.8 5%  
1-408-408-00 s INDUCTOR, MICRO 8.2 5%  
1-408-409-00 s INDUCTOR, MICRO 10 5%

1-408-410-00 s INDUCTOR, MICRO 12 5%  
1-408-411-00 s INDUCTOR, MICRO 15 5%  
1-408-412-00 s INDUCTOR, MICRO 18 5%  
1-408-413-00 s INDUCTOR, MICRO 22 5%  
1-408-414-00 s INDUCTOR, MICRO 27 5%

1-408-415-00 s INDUCTOR, MICRO 33 5%  
1-408-416-00 s INDUCTOR, MICRO 39 5%  
1-408-417-21 s INDUCTOR, MICRO 47 5%  
1-408-418-00 s INDUCTOR, MICRO 56 5%  
1-408-419-00 s INDUCTOR, MICRO 68 5%

1-408-420-00 s INDUCTOR, MICRO 82 5%  
1-408-421-00 s INDUCTOR, MICRO 100 5%  
1-408-422-00 s INDUCTOR, MICRO 120 5%  
1-408-423-00 s INDUCTOR, MICRO 150 5%  
1-408-424-00 s INDUCTOR, MICRO 180 5%

1-408-425-00 s INDUCTOR, MICRO 220 5%  
1-408-426-00 s INDUCTOR, MICRO 270 5%  
1-408-427-00 s INDUCTOR, MICRO 330 5%  
1-408-428-00 s INDUCTOR, MICRO 390 5%  
1-408-429-00 s INDUCTOR, MICRO 470 5%

EF-20 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-254-A	o MOUNTED CIRCUIT BOARD, EF-20 (P)
1pc	1-563-521-11	o CONNECTOR, 20P, FEMALE
1pc	2-139-140-01	o PLATE, SHIELD
2pcs	2-182-909-01	o LEVER, PC BOARD
16pcs	3-621-124-00	o SPACER
1pc	7-621-772-40	s SCREW +B 2X8
2pcs	7-626-320-11	o PIN, SPRING 3X8
1pc	7-682-947-01	s SCREW +PSW 3X6
6pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C5	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C9	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C13	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C17	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C21	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C25	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C29	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C33	1-131-353-00	s TANTALUM 10uF 10% 35V
C35	1-131-353-00	s TANTALUM 10uF 10% 35V
C51	1-131-353-00	s TANTALUM 10uF 10% 35V
C53	1-131-353-00	s TANTALUM 10uF 10% 35V
C61	1-131-353-00	s TANTALUM 10uF 10% 35V
C62	1-131-353-00	s TANTALUM 10uF 10% 35V
C66	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C67	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C68	1-131-353-00	s TANTALUM 10uF 10% 35V
C69	1-131-353-00	s TANTALUM 10uF 10% 35V
C76	1-131-353-00	s TANTALUM 10uF 10% 35V
C78	1-131-353-00	s TANTALUM 10uF 10% 35V
C81	1-107-211-00	s MICA 24PF 5% 500V
C90	1-107-202-00	s MICA 10PF 5% 500V
C98	1-109-539-00	s MICA 150PF 5% 100V
C100	1-126-157-11	s ELECT 10uF 20% 16V
C102	1-131-353-00	s TANTALUM 10uF 10% 35V
C103	1-131-353-00	s TANTALUM 10uF 10% 35V
C105	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C108	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C109	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C110	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C111	1-131-353-00	s TANTALUM 10uF 10% 35V
C112	1-131-353-00	s TANTALUM 10uF 10% 35V
C119	1-131-353-00	s TANTALUM 10uF 10% 35V
C120	1-126-157-11	s ELECT 10uF 20% 16V
C121	1-131-353-00	s TANTALUM 10uF 10% 35V
C124	1-107-211-00	s MICA 24PF 5% 500V
C130	1-107-202-00	s MICA 10PF 5% 500V
C137	1-109-539-00	s MICA 150PF 5% 100V
C140	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C141	1-131-353-00	s TANTALUM 10uF 10% 35V
C142	1-131-353-00	s TANTALUM 10uF 10% 35V
C144	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C147	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C148	1-131-353-00	s TANTALUM 10uF 10% 35V
C149	1-131-353-00	s TANTALUM 10uF 10% 35V
C164	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C165	1-131-353-00	s TANTALUM 10uF 10% 35V
C166	1-126-157-11	s ELECT 10uF 20% 16V
C167	1-131-353-00	s TANTALUM 10uF 10% 35V
C170	1-107-211-00	s MICA 24PF 5% 500V

(EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C176	1-107-202-00	s MICA 10PF 5% 500V
C183	1-109-539-00	s MICA 150PF 5% 100V
C187	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C188	1-131-353-00	s TANTALUM 10uF 10% 35V
C189	1-131-353-00	s TANTALUM 10uF 10% 35V
C191	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C194	1-124-120-11	s ELECT 220uF 20% 25V
C195	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C196	1-131-353-00	s TANTALUM 10uF 10% 35V
C197	1-131-353-00	s TANTALUM 10uF 10% 35V
C212	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C213	1-131-353-00	s TANTALUM 10uF 10% 35V
C214	1-126-157-11	s ELECT 10uF 20% 16V
C215	1-131-353-00	s TANTALUM 10uF 10% 35V
C218	1-107-211-00	s MICA 24PF 5% 500V
C223	1-107-202-00	s MICA 10PF 5% 500V
C231	1-109-539-00	s MICA 150PF 5% 100V
C234	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C235	1-131-353-00	s TANTALUM 10uF 10% 35V
C236	1-131-353-00	s TANTALUM 10uF 10% 35V
C238	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C241	1-124-120-11	s ELECT 220uF 20% 25V
C244	1-131-353-00	s TANTALUM 10uF 10% 35V
C245	1-131-353-00	s TANTALUM 10uF 10% 35V
C246	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C247	1-107-211-00	s MICA 24PF 5% 500V
C253	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C254	1-107-211-00	s MICA 24PF 5% 500V
C266	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C269	1-107-019-00	s MICA 1PF 500V
C270	1-131-353-00	s TANTALUM 10uF 10% 35V
C271	1-131-353-00	s TANTALUM 10uF 10% 35V
C280	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C283	1-107-019-00	s MICA 1PF 500V
C284	1-131-353-00	s TANTALUM 10uF 10% 35V
C285	1-131-353-00	s TANTALUM 10uF 10% 35V
C287	1-131-353-00	s TANTALUM 10uF 10% 35V
C288	1-131-353-00	s TANTALUM 10uF 10% 35V
C296	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C297	1-107-211-00	s MICA 24PF 5% 500V
C299	1-131-353-00	s TANTALUM 10uF 10% 35V
C300	1-131-353-00	s TANTALUM 10uF 10% 35V
C301	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C302	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C303	1-107-210-00	s MICA 22PF 5% 500V
C304	1-131-353-00	s TANTALUM 10uF 10% 35V
C305	1-131-353-00	s TANTALUM 10uF 10% 35V
C306	1-131-353-00	s TANTALUM 10uF 10% 35V
C307	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C308	1-131-353-00	s TANTALUM 10uF 10% 35V
C313	1-131-353-00	s TANTALUM 10uF 10% 35V
C314	1-131-353-00	s TANTALUM 10uF 10% 35V
C315	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C320	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C331	1-107-019-00	s MICA 1PF 500V
C336	1-107-208-00	s MICA 18PF 5% 500V
C340	1-131-353-00	s TANTALUM 10uF 10% 35V
C341	1-131-353-00	s TANTALUM 10uF 10% 35V
C342	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C343	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C344	1-131-353-00	s TANTALUM 10uF 10% 35V
C345	1-131-353-00	s TANTALUM 10uF 10% 35V
C346	1-131-353-00	s TANTALUM 10uF 10% 35V
C347	1-107-210-00	s MICA 22PF 5% 500V
C348	1-131-353-00	s TANTALUM 10uF 10% 35V
C356	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C362	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C366	1-107-208-00	s MICA 18PF 5% 500V
C370	1-131-353-00	s TANTALUM 10uF 10% 35V
C371	1-131-353-00	s TANTALUM 10uF 10% 35V
C372	1-131-353-00	s TANTALUM 10uF 10% 35V
C373	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C381	1-124-589-11	s ELECT 47uF 20% 16V
C385	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C387	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C389	1-163-100-00	s CERAMIC, CHIP 20PF 5% 50V
C393	1-131-353-00	s TANTALUM 10uF 10% 35V
C394	1-131-353-00	s TANTALUM 10uF 10% 35V
C398	1-124-589-11	s ELECT 47uF 20% 16V
C400	1-124-584-00	s ELECT 100uF 20% 10V
C403	1-131-353-00	s TANTALUM 10uF 10% 35V
C404	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C409	1-107-048-00	s MICA 6.8PF 500V
C410	1-107-048-00	s MICA 6.8PF 500V
C420	1-164-232-11	s CERAMIC 0.01uF 10% 50V
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CV1	1-141-291-11	s CAP, CERAMIC TRIMMER
CV2	1-141-291-11	s CAP, CERAMIC TRIMMER
CV3	1-141-291-11	s CAP, CERAMIC TRIMMER
CV4	1-141-291-11	s CAP, CERAMIC TRIMMER
CV6	1-141-291-11	s CAP, CERAMIC TRIMMER
CV7	1-141-291-11	s CAP, CERAMIC TRIMMER
CV8	1-141-291-11	s CAP, CERAMIC TRIMMER
CV9	1-141-291-11	s CAP, CERAMIC TRIMMER
CV10	1-141-291-11	s CAP, CERAMIC TRIMMER
CV12	1-141-291-11	s CAP, CERAMIC TRIMMER
D1	8-719-100-03	s DIODE 1S2835
D2	8-719-100-03	s DIODE 1S2835
D4	8-719-800-76	s DIODE 1SS226
D6	8-719-800-76	s DIODE 1SS226
D7	8-719-911-19	s DIODE 1SS119
D8	8-719-911-19	s DIODE 1SS119
DL1	1-415-167-00	s DELAY LINE
DL2	1-415-167-00	s DELAY LINE
DL3	1-415-167-00	s DELAY LINE
DL4	1-415-167-00	s DELAY LINE
DL5	1-415-316-00	s DELAY LINE 200ns
DL6	1-415-184-00	s DELAY LINE 100ns
DL7	1-415-184-00	s DELAY LINE 100ns
DL8	1-415-184-00	s DELAY LINE 100ns
DL9	1-415-184-00	s DELAY LINE 100ns
IC1	1-808-422-11	s VIDEO INPUT MODULE
IC2	1-808-422-11	s VIDEO INPUT MODULE
IC3	1-808-422-11	s VIDEO INPUT MODULE

## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC4	1-808-422-11	s VIDEO INPUT MODULE
IC5	1-808-422-11	s VIDEO INPUT MODULE
IC6	1-808-422-11	s VIDEO INPUT MODULE
IC7	1-808-422-11	s VIDEO INPUT MODULE
IC8	1-808-422-11	s VIDEO INPUT MODULE
IC9	8-759-207-31	s IC TC74HC4028F
IC10	8-759-207-31	s IC TC74HC4028F
IC11	8-759-207-31	s IC TC74HC4028F
IC12	8-759-207-31	s IC TC74HC4028F
IC13	8-759-207-31	s IC TC74HC4028F
IC14	8-759-207-31	s IC TC74HC4028F
IC15	8-759-204-94	s IC TC74HC00F
IC18	8-759-702-07	s IC NJM13700M
IC19	8-759-972-26	s IC LM1881N
IC20	8-759-009-51	s IC MC14538BF
IC21	8-759-926-18	s IC SN74HC157NS
IC22	8-759-981-65	s IC LM2903M
IC23	8-759-008-82	s IC MC14013BF
IC24	8-759-981-65	s IC LM2903M
IC26	8-759-972-26	s IC LM1881N
IC28	8-759-926-18	s IC SN74HC157NS
IC29	8-759-981-65	s IC LM2903M
IC30	8-759-009-67	s IC MC14584BF
IC31	8-759-003-17	s IC LM317T
IC33	8-759-702-07	s IC NJM13700M
IC34	8-759-972-26	s IC LM1881N
IC35	8-759-009-51	s IC MC14538BF
IC36	8-759-926-18	s IC SN74HC157NS
IC37	8-759-981-65	s IC LM2903M
IC38	8-759-008-82	s IC MC14013BF
IC41	8-759-702-07	s IC NJM13700M
IC42	8-759-972-26	s IC LM1881N
IC44	8-759-926-18	s IC SN74HC157NS
IC45	8-759-981-65	s IC LM2903M
IC46	8-759-009-67	s IC MC14584BF
IC47	8-759-702-07	s IC NJM13700M
IC48	8-759-009-06	s IC MC14052BF
IC49	8-759-141-61	s IC UP103G
IC50	8-759-141-60	s IC UP101G
IC51	8-759-009-06	s IC MC14052BF
IC52	8-759-141-61	s IC UP103G
IC53	8-759-141-60	s IC UP101G
IC54	8-759-702-07	s IC NJM13700M
IC55	8-759-009-07	s IC MC14053BF
IC56	8-741-100-43	s IC SBX1595-01
IC57	8-759-702-07	s IC NJM13700M
IC58	8-759-971-95	s IC LM317LZ
IC59	8-759-141-61	s IC UP103G
IC60	8-759-141-60	s IC UP101G
IC61	8-759-908-17	s IC TL082CPS
IC62	8-759-141-61	s IC UP103G
IC63	8-759-141-60	s IC UP101G
IC64	8-759-141-61	s IC UP103G
IC65	8-741-100-43	s IC SBX1595-01
IC66	8-759-141-61	s IC UP103G
IC67	8-759-141-60	s IC UP101G
IC68	8-759-702-07	s IC NJM13700M
IC69	8-759-971-95	s IC LM317LZ
IC70	8-759-702-07	s IC NJM13700M

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (EF-20 BOARD)

Ref. No.

or Q'ty Part No. SP Description

IC71 8-759-204-94 s IC TC74HC00F  
 IC72 8-759-204-94 s IC TC74HC00F  
 IC73 8-759-982-31 s IC RC78M05FA  
 IC74 8-759-009-07 s IC MC14053BF  
 IC75 8-759-009-07 s IC MC14053BF

IC76 8-759-009-07 s IC MC14053BF  
 IC77 8-759-982-22 s IC RC78L06A  
 IC78 8-759-982-45 s IC RC79L06A

L1 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L2 1-410-709-31 s INDUCTOR, CHIP 22uH  
 L3 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L4 1-410-709-31 s INDUCTOR, CHIP 22uH  
 L5 1-410-718-31 s INDUCTOR, CHIP 120uH

L6 1-410-709-31 s INDUCTOR, CHIP 22uH  
 L7 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L8 1-410-709-31 s INDUCTOR, CHIP 22uH  
 L9 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L10 1-410-718-31 s INDUCTOR, CHIP 120uH

L11 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L12 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L13 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L15 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L16 1-410-718-31 s INDUCTOR, CHIP 120uH

L17 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L19 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L20 1-410-718-31 s INDUCTOR, CHIP 120uH  
 L22 1-410-718-31 s INDUCTOR, CHIP 120uH

Q1 8-729-175-73 s TRANSISTOR 2SC2757  
 Q2 8-729-112-65 s TRANSISTOR 2SA1462  
 Q3 8-729-175-73 s TRANSISTOR 2SC2757  
 Q4 8-729-112-65 s TRANSISTOR 2SA1462  
 Q5 8-729-175-73 s TRANSISTOR 2SC2757

Q6 8-729-112-65 s TRANSISTOR 2SA1462  
 Q7 8-729-175-73 s TRANSISTOR 2SC2757  
 Q8 8-729-112-65 s TRANSISTOR 2SA1462  
 Q9 8-729-175-73 s TRANSISTOR 2SC2757  
 Q10 8-729-112-65 s TRANSISTOR 2SA1462

Q11 8-729-175-73 s TRANSISTOR 2SC2757  
 Q12 8-729-112-65 s TRANSISTOR 2SA1462  
 Q13 8-729-175-73 s TRANSISTOR 2SC2757  
 Q14 8-729-112-65 s TRANSISTOR 2SA1462  
 Q15 8-729-175-73 s TRANSISTOR 2SC2757

Q16 8-729-112-65 s TRANSISTOR 2SA1462  
 Q17 8-729-175-73 s TRANSISTOR 2SC2757  
 Q18 8-729-112-65 s TRANSISTOR 2SA1462  
 Q19 8-729-175-73 s TRANSISTOR 2SC2757  
 Q20 8-729-112-65 s TRANSISTOR 2SA1462

Q21 8-729-112-65 s TRANSISTOR 2SA1462  
 Q22 8-729-175-73 s TRANSISTOR 2SC2757  
 Q23 8-729-112-65 s TRANSISTOR 2SA1462  
 Q24 8-729-175-73 s TRANSISTOR 2SC2757  
 Q25 8-729-175-73 s TRANSISTOR 2SC2757

Q26 8-729-112-65 s TRANSISTOR 2SA1462  
 Q27 8-729-112-65 s TRANSISTOR 2SA1462  
 Q28 8-729-175-73 s TRANSISTOR 2SC2757  
 Q29 8-729-112-65 s TRANSISTOR 2SA1462  
 Q30 8-729-112-65 s TRANSISTOR 2SA1462

Q31 8-729-112-65 s TRANSISTOR 2SA1462

## (EF-20 BOARD)

Ref. No.

or Q'ty Part No. SP Description

Q32 8-729-175-73 s TRANSISTOR 2SC2757  
 Q33 8-729-175-73 s TRANSISTOR 2SC2757  
 Q34 8-729-175-73 s TRANSISTOR 2SC2757  
 Q35 8-729-175-73 s TRANSISTOR 2SC2757  
 Q36 8-729-175-73 s TRANSISTOR 2SC2757

Q37 8-729-100-66 s TRANSISTOR 2SC1623  
 Q38 8-729-116-64 s TRANSISTOR 2SK508-K51  
 Q39 8-729-112-65 s TRANSISTOR 2SA1462  
 Q40 8-729-100-66 s TRANSISTOR 2SC1623  
 Q41 8-729-216-22 s TRANSISTOR 2SA1162

Q42 8-729-216-22 s TRANSISTOR 2SA1162  
 Q43 8-729-100-66 s TRANSISTOR 2SC1623  
 Q44 8-729-175-73 s TRANSISTOR 2SC2757  
 Q45 8-729-112-65 s TRANSISTOR 2SA1462  
 Q46 8-729-112-65 s TRANSISTOR 2SA1462

Q47 8-729-175-73 s TRANSISTOR 2SC2757  
 Q48 8-729-112-65 s TRANSISTOR 2SA1462  
 Q49 8-729-112-65 s TRANSISTOR 2SA1462  
 Q50 8-729-112-65 s TRANSISTOR 2SA1462  
 Q51 8-729-175-73 s TRANSISTOR 2SC2757

Q52 8-729-175-73 s TRANSISTOR 2SC2757  
 Q53 8-729-175-73 s TRANSISTOR 2SC2757  
 Q54 8-729-175-73 s TRANSISTOR 2SC2757  
 Q55 8-729-175-73 s TRANSISTOR 2SC2757  
 Q56 8-729-100-66 s TRANSISTOR 2SC1623

Q57 8-729-116-64 s TRANSISTOR 2SK508-K51  
 Q58 8-729-112-65 s TRANSISTOR 2SA1462  
 Q59 8-729-100-66 s TRANSISTOR 2SC1623  
 Q60 8-729-216-22 s TRANSISTOR 2SA1162  
 Q61 8-729-216-22 s TRANSISTOR 2SA1162

Q62 8-729-100-66 s TRANSISTOR 2SC1623  
 Q63 8-729-175-73 s TRANSISTOR 2SC2757  
 Q64 8-729-112-65 s TRANSISTOR 2SA1462  
 Q65 8-729-112-65 s TRANSISTOR 2SA1462  
 Q66 8-729-175-73 s TRANSISTOR 2SC2757

Q67 8-729-112-65 s TRANSISTOR 2SA1462  
 Q68 8-729-112-65 s TRANSISTOR 2SA1462  
 Q69 8-729-175-73 s TRANSISTOR 2SC2757  
 Q70 8-729-175-73 s TRANSISTOR 2SC2757  
 Q71 8-729-112-65 s TRANSISTOR 2SA1462

Q72 8-729-112-65 s TRANSISTOR 2SA1462  
 Q73 8-729-175-73 s TRANSISTOR 2SC2757  
 Q74 8-729-112-65 s TRANSISTOR 2SA1462  
 Q75 8-729-112-65 s TRANSISTOR 2SA1462  
 Q76 8-729-175-73 s TRANSISTOR 2SC2757

Q77 8-729-112-65 s TRANSISTOR 2SA1462  
 Q78 8-729-112-65 s TRANSISTOR 2SA1462  
 Q79 8-729-112-65 s TRANSISTOR 2SA1462  
 Q80 8-729-175-73 s TRANSISTOR 2SC2757  
 Q81 8-729-175-73 s TRANSISTOR 2SC2757

Q82 8-729-175-73 s TRANSISTOR 2SC2757  
 Q83 8-729-175-73 s TRANSISTOR 2SC2757  
 Q84 8-729-175-73 s TRANSISTOR 2SC2757  
 Q85 8-729-100-66 s TRANSISTOR 2SC1623  
 Q86 8-729-116-64 s TRANSISTOR 2SK508-K51

Q87 8-729-112-65 s TRANSISTOR 2SA1462  
 Q88 8-729-100-66 s TRANSISTOR 2SC1623  
 Q89 8-729-216-22 s TRANSISTOR 2SA1162  
 Q90 8-729-216-22 s TRANSISTOR 2SA1162

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q91	8-729-100-66	s TRANSISTOR 2SC1623
Q92	8-729-175-73	s TRANSISTOR 2SC2757
Q93	8-729-112-65	s TRANSISTOR 2SA1462
Q94	8-729-112-65	s TRANSISTOR 2SA1462
Q95	8-729-175-73	s TRANSISTOR 2SC2757
Q96	8-729-112-65	s TRANSISTOR 2SA1462
Q97	8-729-112-65	s TRANSISTOR 2SA1462
Q98	8-729-175-73	s TRANSISTOR 2SC2757
Q99	8-729-175-73	s TRANSISTOR 2SC2757
Q100	8-729-112-65	s TRANSISTOR 2SA1462
Q101	8-729-112-65	s TRANSISTOR 2SA1462
Q102	8-729-175-73	s TRANSISTOR 2SC2757
Q103	8-729-112-65	s TRANSISTOR 2SA1462
Q104	8-729-112-65	s TRANSISTOR 2SA1462
Q105	8-729-175-73	s TRANSISTOR 2SC2757
Q106	8-729-112-65	s TRANSISTOR 2SA1462
Q107	8-729-112-65	s TRANSISTOR 2SA1462
Q108	8-729-112-65	s TRANSISTOR 2SA1462
Q109	8-729-175-73	s TRANSISTOR 2SC2757
Q110	8-729-175-73	s TRANSISTOR 2SC2757
Q111	8-729-175-73	s TRANSISTOR 2SC2757
Q112	8-729-175-73	s TRANSISTOR 2SC2757
Q113	8-729-175-73	s TRANSISTOR 2SC2757
Q114	8-729-100-66	s TRANSISTOR 2SC1623
Q115	8-729-116-64	s TRANSISTOR 2SK508-K51
Q116	8-729-112-65	s TRANSISTOR 2SA1462
Q117	8-729-100-66	s TRANSISTOR 2SC1623
Q118	8-729-216-22	s TRANSISTOR 2SA1162
Q119	8-729-216-22	s TRANSISTOR 2SA1162
Q120	8-729-100-66	s TRANSISTOR 2SC1623
Q121	8-729-175-73	s TRANSISTOR 2SC2757
Q122	8-729-175-73	s TRANSISTOR 2SC2757
Q123	8-729-175-73	s TRANSISTOR 2SC2757
Q124	8-729-175-73	s TRANSISTOR 2SC2757
Q125	8-729-175-73	s TRANSISTOR 2SC2757
Q126	8-729-100-66	s TRANSISTOR 2SC1623
Q127	8-729-216-22	s TRANSISTOR 2SA1162
Q128	8-729-100-66	s TRANSISTOR 2SC1623
Q129	8-729-216-22	s TRANSISTOR 2SA1162
Q130	8-729-175-73	s TRANSISTOR 2SC2757
Q131	8-729-100-66	s TRANSISTOR 2SC1623
Q132	8-729-116-64	s TRANSISTOR 2SK508-K51
Q133	8-729-216-22	s TRANSISTOR 2SA1162
Q134	8-729-175-73	s TRANSISTOR 2SC2757
Q135	8-729-100-66	s TRANSISTOR 2SC1623
Q136	8-729-116-64	s TRANSISTOR 2SK508-K51
Q137	8-729-216-22	s TRANSISTOR 2SA1162
Q138	8-729-175-73	s TRANSISTOR 2SC2757
Q139	8-729-175-73	s TRANSISTOR 2SC2757
Q140	8-729-175-73	s TRANSISTOR 2SC2757
Q141	8-729-175-73	s TRANSISTOR 2SC2757
Q142	8-729-112-65	s TRANSISTOR 2SA1462
Q143	8-729-116-64	s TRANSISTOR 2SK508-K51
Q144	8-729-175-73	s TRANSISTOR 2SC2757
Q145	8-729-112-65	s TRANSISTOR 2SA1462
Q146	8-729-175-73	s TRANSISTOR 2SC2757
Q147	8-729-175-73	s TRANSISTOR 2SC2757
Q148	8-729-175-73	s TRANSISTOR 2SC2757
Q149	8-729-175-73	s TRANSISTOR 2SC2757

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Ref. No. or Q'ty	Part No.	SP Description
Q150	8-729-112-65	s TRANSISTOR 2SA1462
Q151	8-729-116-64	s TRANSISTOR 2SK508-K51
Q152	8-729-175-73	s TRANSISTOR 2SC2757
Q153	8-729-112-65	s TRANSISTOR 2SA1462
Q154	8-729-100-66	s TRANSISTOR 2SC1623
Q155	8-729-216-22	s TRANSISTOR 2SA1162
Q156	8-729-100-66	s TRANSISTOR 2SC1623
Q157	8-729-116-64	s TRANSISTOR 2SK508-K51
Q158	8-729-112-65	s TRANSISTOR 2SA1462
Q159	8-729-112-65	s TRANSISTOR 2SA1462
Q160	8-729-116-64	s TRANSISTOR 2SK508-K51
Q161	8-729-100-66	s TRANSISTOR 2SC1623
Q162	8-729-175-73	s TRANSISTOR 2SC2757
Q163	8-729-175-73	s TRANSISTOR 2SC2757
Q164	8-729-175-73	s TRANSISTOR 2SC2757
Q165	8-729-175-73	s TRANSISTOR 2SC2757
Q166	8-729-175-73	s TRANSISTOR 2SC2757
Q167	8-729-216-22	s TRANSISTOR 2SA1162
Q168	8-729-175-73	s TRANSISTOR 2SC2757
Q169	8-729-116-64	s TRANSISTOR 2SK508-K51
Q170	8-729-175-73	s TRANSISTOR 2SC2757
Q171	8-729-175-73	s TRANSISTOR 2SC2757
Q172	8-729-112-65	s TRANSISTOR 2SA1462
Q173	8-729-116-64	s TRANSISTOR 2SK508-K51
Q174	8-729-112-65	s TRANSISTOR 2SA1462
Q175	8-729-112-65	s TRANSISTOR 2SA1462
Q176	8-729-175-73	s TRANSISTOR 2SC2757
Q177	8-729-175-73	s TRANSISTOR 2SC2757
Q178	8-729-112-65	s TRANSISTOR 2SA1462
Q179	8-729-100-66	s TRANSISTOR 2SC1623
Q180	8-729-112-65	s TRANSISTOR 2SA1462
Q181	8-729-112-65	s TRANSISTOR 2SA1462
Q182	8-729-175-73	s TRANSISTOR 2SC2757
Q183	8-729-175-73	s TRANSISTOR 2SC2757
Q184	8-729-175-73	s TRANSISTOR 2SC2757
Q185	8-729-100-66	s TRANSISTOR 2SC1623
Q186	8-729-100-66	s TRANSISTOR 2SC1623
Q187	8-729-100-66	s TRANSISTOR 2SC1623
Q189	8-729-216-22	s TRANSISTOR 2SA1162
Q190	8-729-216-22	s TRANSISTOR 2SA1162
Q191	8-729-216-22	s TRANSISTOR 2SA1162
Q193	8-729-175-73	s TRANSISTOR 2SC2757
Q194	8-729-175-73	s TRANSISTOR 2SC2757
Q195	8-729-112-65	s TRANSISTOR 2SA1462
Q196	8-729-116-64	s TRANSISTOR 2SK508-K51
Q197	8-729-175-73	s TRANSISTOR 2SC2757
Q198	8-729-112-65	s TRANSISTOR 2SA1462
Q199	8-729-175-73	s TRANSISTOR 2SC2757
Q200	8-729-112-65	s TRANSISTOR 2SA1462
Q201	8-729-112-65	s TRANSISTOR 2SA1462
Q202	8-729-175-73	s TRANSISTOR 2SC2757
Q203	8-729-112-65	s TRANSISTOR 2SA1462
Q204	8-729-112-65	s TRANSISTOR 2SA1462
Q205	8-729-112-65	s TRANSISTOR 2SA1462
Q206	8-729-112-65	s TRANSISTOR 2SA1462
Q207	8-729-175-73	s TRANSISTOR 2SC2757
Q208	8-729-175-73	s TRANSISTOR 2SC2757
Q209	8-729-175-73	s TRANSISTOR 2SC2757
Q210	8-729-175-73	s TRANSISTOR 2SC2757

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## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q211	8-729-100-66	s TRANSISTOR 2SC1623
Q212	8-729-100-66	s TRANSISTOR 2SC1623
Q213	8-729-216-22	s TRANSISTOR 2SA1162
Q214	8-729-216-22	s TRANSISTOR 2SA1162
Q215	8-729-216-22	s TRANSISTOR 2SA1162
Q216	8-729-216-22	s TRANSISTOR 2SA1162
Q217	8-729-100-66	s TRANSISTOR 2SC1623
Q218	8-729-216-22	s TRANSISTOR 2SA1162
Q219	8-729-216-22	s TRANSISTOR 2SA1162
Q220	8-729-100-66	s TRANSISTOR 2SC1623
Q221	8-729-216-22	s TRANSISTOR 2SA1162
Q222	8-729-216-22	s TRANSISTOR 2SA1162
Q223	8-729-100-66	s TRANSISTOR 2SC1623
Q224	8-729-216-22	s TRANSISTOR 2SA1162
Q225	8-729-216-22	s TRANSISTOR 2SA1162
Q226	8-729-100-66	s TRANSISTOR 2SC1623
Q227	8-729-216-22	s TRANSISTOR 2SA1162
Q228	8-729-216-22	s TRANSISTOR 2SA1162
Q229	8-729-175-73	s TRANSISTOR 2SC2757
Q230	8-729-100-66	s TRANSISTOR 2SC1623
Q231	8-729-116-64	s TRANSISTOR 2SK508-K51
Q232	8-729-216-22	s TRANSISTOR 2SA1162
Q234	8-729-112-65	s TRANSISTOR 2SA1462
Q235	8-729-175-73	s TRANSISTOR 2SC2757
Q237	8-729-175-73	s TRANSISTOR 2SC2757
Q238	8-729-175-73	s TRANSISTOR 2SC2757
Q240	8-729-112-65	s TRANSISTOR 2SA1462
Q241	8-729-112-65	s TRANSISTOR 2SA1462
Q242	8-729-175-73	s TRANSISTOR 2SC2757
Q243	8-729-175-73	s TRANSISTOR 2SC2757
Q244	8-729-175-73	s TRANSISTOR 2SC2757
Q245	8-729-175-73	s TRANSISTOR 2SC2757
Q246	8-729-175-73	s TRANSISTOR 2SC2757
Q247	8-729-175-73	s TRANSISTOR 2SC2757
Q248	8-729-175-73	s TRANSISTOR 2SC2757
Q249	8-729-175-73	s TRANSISTOR 2SC2757
Q250	8-729-116-64	s TRANSISTOR 2SK508-K51
Q251	8-729-112-65	s TRANSISTOR 2SA1462
Q252	8-729-175-73	s TRANSISTOR 2SC2757
Q253	8-729-112-65	s TRANSISTOR 2SA1462
Q254	8-729-112-65	s TRANSISTOR 2SA1462
Q255	8-729-175-73	s TRANSISTOR 2SC2757
Q256	8-729-112-65	s TRANSISTOR 2SA1462
Q257	8-729-112-65	s TRANSISTOR 2SA1462
R362	1-216-309-00	s METAL 5.6 5% 1/10W
R363	1-216-309-00	s METAL 5.6 5% 1/10W
R364	1-215-394-00	s METAL 75 1% 1/6W
R608	1-216-309-00	s METAL 5.6 5% 1/10W
R609	1-216-309-00	s METAL 5.6 5% 1/10W
R610	1-216-309-00	s METAL 5.6 5% 1/10W
R611	1-216-309-00	s METAL 5.6 5% 1/10W
R612	1-215-394-00	s METAL 75 1% 1/6W
R613	1-215-394-00	s METAL 75 1% 1/6W
R614	1-215-394-00	s METAL 75 1% 1/6W
R680	1-216-309-00	s METAL 5.6 5% 1/10W
R681	1-216-309-00	s METAL 5.6 5% 1/10W
R682	1-215-394-00	s METAL 75 1% 1/6W
R780	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R781	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W

## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R962	1-249-418-11	s CARBON 1.2K 5% 1/4W
R963	1-249-418-11	s CARBON 1.2K 5% 1/4W
R978	1-215-449-11	s METAL FILM 15K
RV1	1-237-032-11	s RES, ADJ, METAL 500
RV2	1-237-032-11	s RES, ADJ, METAL 500
RV3	1-237-036-11	s RES, ADJ, METAL 10K
RV4	1-237-035-11	s RES, ADJ, METAL 5K
RV5	1-237-037-11	s RES, ADJ, METAL 20K
RV6	1-237-032-11	s RES, ADJ, METAL 500
RV7	1-237-032-11	s RES, ADJ, METAL 500
RV8	1-237-036-11	s RES, ADJ, METAL 10K
RV9	1-237-035-11	s RES, ADJ, METAL 5K
RV10	1-237-037-11	s RES, ADJ, METAL 20K
RV11	1-237-032-11	s RES, ADJ, METAL 500
RV12	1-237-032-11	s RES, ADJ, METAL 500
RV14	1-237-035-11	s RES, ADJ, METAL 5K
RV15	1-237-037-11	s RES, ADJ, METAL 20K
RV16	1-237-032-11	s RES, ADJ, METAL 500
RV17	1-237-032-11	s RES, ADJ, METAL 500
RV19	1-237-035-11	s RES, ADJ, METAL 5K
RV20	1-237-037-11	s RES, ADJ, METAL 20K
RV21	1-237-032-11	s RES, ADJ, METAL 500
RV23	1-237-032-11	s RES, ADJ, METAL 500
RV24	1-237-037-11	s RES, ADJ, METAL 20K
RV25	1-237-032-11	s RES, ADJ, METAL 500
RV26	1-237-037-11	s RES, ADJ, METAL 20K
RV27	1-237-031-11	s RES, ADJ, METAL 200
RV28	1-237-035-11	s RES, ADJ, METAL 5K
RV30	1-237-034-11	s RES, ADJ, METAL 2K
RV31	1-237-033-11	s RES, ADJ, METAL 1K
RV32	1-237-036-11	s RES, ADJ, METAL 10K
RV33	1-237-031-11	s RES, ADJ, METAL 200
RV34	1-237-035-11	s RES, ADJ, METAL 5K
RV36	1-237-034-11	s RES, ADJ, METAL 2K
RV37	1-237-033-11	s RES, ADJ, METAL 1K
RV38	1-237-036-11	s RES, ADJ, METAL 10K
RV39	1-237-032-11	s RES, ADJ, METAL 500
RV39	1-237-033-11	s RES, ADJ, METAL 1K
RV39	1-237-033-11	s RES, ADJ, METAL 1K
RV40	1-237-032-11	s RES, ADJ, METAL 500
RV40	1-237-033-11	s RES, ADJ, METAL 1K
RV40	1-237-033-11	s RES, ADJ, METAL 1K
RV42	1-237-032-11	s RES, ADJ, METAL 500
RV43	1-237-032-11	s RES, ADJ, METAL 500
RV44	1-237-030-11	s RES, ADJ, CERMET 100
RV45	1-237-034-11	s RES, ADJ, METAL 2K
RV46	1-237-035-11	s RES, ADJ, METAL 5K
RV47	1-237-035-11	s RES, ADJ, METAL 5K
RV48	1-237-034-11	s RES, ADJ, METAL 2K
RV49	1-237-033-11	s RES, ADJ, METAL 1K
RV50	1-237-034-11	s RES, ADJ, METAL 2K
RV51	1-237-033-11	s RES, ADJ, METAL 1K
RV52	1-237-033-11	s RES, ADJ, METAL 1K
RV53	1-237-033-11	s RES, ADJ, METAL 1K
RV54	1-237-498-21	s RES, ADJ, CERMET 200
RV55	1-237-032-11	s RES, ADJ, METAL 500
RV56	1-237-035-11	s RES, ADJ, METAL 5K
RV57	1-237-034-11	s RES, ADJ, METAL 2K

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## (EF-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV58	1-237-033-11	s RES, ADJ, METAL 1K
RV59	1-237-033-11	s RES, ADJ, METAL 1K
RV60	1-237-498-21	s RES, ADJ, CERMET 200
RV61	1-237-029-11	s RES, ADJ, METAL 50
RV62	1-237-032-11	s RES, ADJ, METAL 500
RV64	1-237-030-11	s RES, ADJ, CERMET 100
RV65	1-237-037-11	s RES, ADJ, METAL 20K
RV66	1-237-037-11	s RES, ADJ, METAL 20K
RV67	1-237-037-11	s RES, ADJ, METAL 20K
RV68	1-237-037-11	s RES, ADJ, METAL 20K
RV69	1-237-037-11	s RES, ADJ, METAL 20K
RV70	1-237-037-11	s RES, ADJ, METAL 20K
RV71	1-237-030-11	s RES, ADJ, CERMET 100

## EF-20C BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-256-A	o MOUNTED CIRCUIT BOARD, EF-20C (P)
1pc	1-563-521-11	o CONNECTOR, 20P, FEMALE
1pc	2-139-140-01	o PLATE, SHIELD
2pcs	2-182-909-01	o LEVER, PC BOARD
1pc	7-621-772-40	s SCREW +B 2X8
2pcs	7-626-320-11	o PIN, SPRING 3X8
1pc	7-682-947-01	s SCREW +PSW 3X6
6pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C5	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C9	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C13	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C17	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C21	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C25	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C29	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C33	1-131-353-00	s TANTALUM 10uF 10% 35V
C35	1-131-353-00	s TANTALUM 10uF 10% 35V
C51	1-131-353-00	s TANTALUM 10uF 10% 35V
C53	1-131-353-00	s TANTALUM 10uF 10% 35V
C61	1-131-353-00	s TANTALUM 10uF 10% 35V
C62	1-131-353-00	s TANTALUM 10uF 10% 35V
C66	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C67	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C68	1-131-353-00	s TANTALUM 10uF 10% 35V
C69	1-131-353-00	s TANTALUM 10uF 10% 35V
C76	1-131-353-00	s TANTALUM 10uF 10% 35V
C78	1-131-353-00	s TANTALUM 10uF 10% 35V
C81	1-107-211-00	s MICA 24PF 5% 500V
C90	1-107-202-00	s MICA 10PF 5% 500V
C100	1-126-157-11	s ELECT 10uF 20% 16V
C102	1-131-353-00	s TANTALUM 10uF 10% 35V
C103	1-131-353-00	s TANTALUM 10uF 10% 35V
C108	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C109	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C110	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C111	1-131-353-00	s TANTALUM 10uF 10% 35V
C112	1-131-353-00	s TANTALUM 10uF 10% 35V
C119	1-131-353-00	s TANTALUM 10uF 10% 35V
C120	1-126-157-11	s ELECT 10uF 20% 16V
C121	1-131-353-00	s TANTALUM 10uF 10% 35V
C124	1-107-211-00	s MICA 24PF 5% 500V
C130	1-107-202-00	s MICA 10PF 5% 500V
C140	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C141	1-131-353-00	s TANTALUM 10uF 10% 35V
C142	1-131-353-00	s TANTALUM 10uF 10% 35V
C147	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C148	1-131-353-00	s TANTALUM 10uF 10% 35V
C149	1-131-353-00	s TANTALUM 10uF 10% 35V
C164	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C165	1-131-353-00	s TANTALUM 10uF 10% 35V
C166	1-126-157-11	s ELECT 10uF 20% 16V
C167	1-131-353-00	s TANTALUM 10uF 10% 35V
C170	1-107-211-00	s MICA 24PF 5% 500V
C176	1-107-202-00	s MICA 10PF 5% 500V
C187	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C188	1-131-353-00	s TANTALUM 10uF 10% 35V
C189	1-131-353-00	s TANTALUM 10uF 10% 35V

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## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C194	1-124-120-11	s ELECT 220uF 20% 25V
C195	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C196	1-131-353-00	s TANTALUM 10uF 10% 35V
C197	1-131-353-00	s TANTALUM 10uF 10% 35V
C212	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C213	1-131-353-00	s TANTALUM 10uF 10% 35V
C214	1-126-157-11	s ELECT 10uF 20% 16V
C215	1-131-353-00	s TANTALUM 10uF 10% 35V
C218	1-107-211-00	s MICA 24PF 5% 500V
C223	1-107-202-00	s MICA 10PF 5% 500V
C234	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C235	1-131-353-00	s TANTALUM 10uF 10% 35V
C236	1-131-353-00	s TANTALUM 10uF 10% 35V
C241	1-124-120-11	s ELECT 220uF 20% 25V
C244	1-131-353-00	s TANTALUM 10uF 10% 35V
C245	1-131-353-00	s TANTALUM 10uF 10% 35V
C246	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C247	1-107-211-00	s MICA 24PF 5% 500V
C253	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C254	1-107-211-00	s MICA 24PF 5% 500V
C266	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C269	1-107-019-00	s MICA 1PF 500V
C270	1-131-353-00	s TANTALUM 10uF 10% 35V
C271	1-131-353-00	s TANTALUM 10uF 10% 35V
C280	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C283	1-107-019-00	s MICA 1PF 500V
C284	1-131-353-00	s TANTALUM 10uF 10% 35V
C285	1-131-353-00	s TANTALUM 10uF 10% 35V
C287	1-131-353-00	s TANTALUM 10uF 10% 35V
C288	1-131-353-00	s TANTALUM 10uF 10% 35V
C296	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C299	1-131-353-00	s TANTALUM 10uF 10% 35V
C300	1-131-353-00	s TANTALUM 10uF 10% 35V
C301	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C302	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C303	1-107-210-00	s MICA 22PF 5% 500V
C304	1-131-353-00	s TANTALUM 10uF 10% 35V
C305	1-131-353-00	s TANTALUM 10uF 10% 35V
C306	1-131-353-00	s TANTALUM 10uF 10% 35V
C307	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C308	1-131-353-00	s TANTALUM 10uF 10% 35V
C313	1-131-353-00	s TANTALUM 10uF 10% 35V
C314	1-131-353-00	s TANTALUM 10uF 10% 35V
C315	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C320	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C331	1-107-019-00	s MICA 1PF 500V
C336	1-107-208-00	s MICA 18PF 5% 500V
C340	1-131-353-00	s TANTALUM 10uF 10% 35V
C341	1-131-353-00	s TANTALUM 10uF 10% 35V
C342	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C343	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C344	1-131-353-00	s TANTALUM 10uF 10% 35V
C345	1-131-353-00	s TANTALUM 10uF 10% 35V
C346	1-131-353-00	s TANTALUM 10uF 10% 35V
C347	1-107-210-00	s MICA 22PF 5% 500V
C348	1-131-353-00	s TANTALUM 10uF 10% 35V
C356	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C362	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C366	1-107-208-00	s MICA 18PF 5% 500V

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C370	1-131-353-00	s TANTALUM 10uF 10% 35V
C371	1-131-353-00	s TANTALUM 10uF 10% 35V
C372	1-131-353-00	s TANTALUM 10uF 10% 35V
C373	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C381	1-124-589-11	s ELECT 47uF 20% 16V
C385	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C387	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C389	1-163-100-00	s CERAMIC, CHIP 20PF 5% 50V
C393	1-131-353-00	s TANTALUM 10uF 10% 35V
C394	1-131-353-00	s TANTALUM 10uF 10% 35V
C398	1-124-589-11	s ELECT 47uF 20% 16V
C400	1-124-584-00	s ELECT 100uF 20% 10V
C403	1-131-353-00	s TANTALUM 10uF 10% 35V
C404	1-135-091-00	s TANTALUM, CHIP 1uF 10% 16V
C409	1-107-202-00	s MICA 10PF 5% 500V
C410	1-107-202-00	s MICA 10PF 5% 500V
C420	1-164-232-11	s CERAMIC 0.01uF 10% 50V
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CV1	1-141-291-11	s CAP, CERAMIC TRIMMER
CV2	1-141-291-11	s CAP, CERAMIC TRIMMER
CV3	1-141-291-11	s CAP, CERAMIC TRIMMER
CV4	1-141-291-11	s CAP, CERAMIC TRIMMER
CV6	1-141-291-11	s CAP, CERAMIC TRIMMER
CV7	1-141-291-11	s CAP, CERAMIC TRIMMER
CV8	1-141-291-11	s CAP, CERAMIC TRIMMER
CV9	1-141-291-11	s CAP, CERAMIC TRIMMER
CV10	1-141-291-11	s CAP, CERAMIC TRIMMER
CV12	1-141-291-11	s CAP, CERAMIC TRIMMER
D1	8-719-100-03	s DIODE 1S2835
D2	8-719-100-03	s DIODE 1S2835
D4	8-719-800-76	s DIODE 1SS226
D6	8-719-800-76	s DIODE 1SS226
D7	8-719-911-19	s DIODE 1SS119
D8	8-719-911-19	s DIODE 1SS119
DL6	1-415-578-11	s DELAY LINE
DL7	1-415-578-11	s DELAY LINE
DL8	1-415-578-11	s DELAY LINE
DL9	1-415-578-11	s DELAY LINE
IC9	8-759-207-31	s IC TC74HC4028F
IC10	8-759-207-31	s IC TC74HC4028F
IC11	8-759-207-31	s IC TC74HC4028F
IC12	8-759-207-31	s IC TC74HC4028F
IC13	8-759-207-31	s IC TC74HC4028F
IC14	8-759-207-31	s IC TC74HC4028F
IC15	8-759-204-94	s IC TC74HC00F
IC18	8-759-702-07	s IC NJM13700M
IC21	8-759-926-18	s IC SN74HC157NS
IC28	8-759-926-18	s IC SN74HC157NS
IC30	8-759-209-20	s IC TC4584BF
IC31	8-759-003-17	s IC LM317T
IC33	8-759-702-07	s IC NJM13700M
IC36	8-759-926-18	s IC SN74HC157NS
IC41	8-759-702-07	s IC NJM13700M
IC44	8-759-926-18	s IC SN74HC157NS
IC46	8-759-209-20	s IC TC4584BF

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## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC47	8-759-702-07	s IC NJM13700M
IC48	8-759-009-06	s IC MC14052BF
IC49	8-759-141-61	s IC UPA103G
IC50	8-759-141-60	s IC UPA101G
IC51	8-759-009-06	s IC MC14052BF
IC52	8-759-141-61	s IC UPA103G
IC53	8-759-141-60	s IC UPA101G
IC54	8-759-702-07	s IC NJM13700M
IC55	8-759-009-07	s IC MC14053BF
IC56	8-741-100-43	s IC SBX1595-01
IC57	8-759-702-07	s IC NJM13700M
IC58	8-759-971-95	s IC LM317LZ
IC59	8-759-141-61	s IC UPA103G
IC60	8-759-141-60	s IC UPA101G
IC61	8-759-908-17	s IC TL082CPS
IC62	8-759-141-61	s IC UPA103G
IC63	8-759-141-60	s IC UPA101G
IC64	8-759-141-61	s IC UPA103G
IC65	8-741-100-43	s IC SBX1595-01
IC66	8-759-141-61	s IC UPA103G
IC67	8-759-141-60	s IC UPA101G
IC68	8-759-702-07	s IC NJM13700M
IC69	8-759-971-95	s IC LM317LZ
IC70	8-759-702-07	s IC NJM13700M
IC71	8-759-204-94	s IC TC74HC00F
IC72	8-759-204-94	s IC TC74HC00F
IC73	8-759-982-31	s IC RC78M05FA
IC74	8-759-009-07	s IC MC14053BF
IC75	8-759-009-07	s IC MC14053BF
IC76	8-759-009-07	s IC MC14053BF
IC77	8-759-982-22	s IC RC78L06A
IC78	8-759-982-45	s IC RC79L06A
JR1	1-216-295-00	s METAL, CHIP 0-OHM
JR2	1-216-295-00	s METAL, CHIP 0-OHM
JR3	1-216-295-00	s METAL, CHIP 0-OHM
JR4	1-216-295-00	s METAL, CHIP 0-OHM
JR5	1-216-295-00	s METAL, CHIP 0-OHM
JR6	1-216-295-00	s METAL, CHIP 0-OHM
JR7	1-216-295-00	s METAL, CHIP 0-OHM
JR8	1-216-295-00	s METAL, CHIP 0-OHM
L1	1-410-718-31	s INDUCTOR, CHIP 120uH
L3	1-410-718-31	s INDUCTOR, CHIP 120uH
L5	1-410-718-31	s INDUCTOR, CHIP 120uH
L7	1-410-718-31	s INDUCTOR, CHIP 120uH
L9	1-410-718-31	s INDUCTOR, CHIP 120uH
L10	1-410-718-31	s INDUCTOR, CHIP 120uH
L11	1-410-718-31	s INDUCTOR, CHIP 120uH
L12	1-410-718-31	s INDUCTOR, CHIP 120uH
L13	1-410-718-31	s INDUCTOR, CHIP 120uH
L15	1-410-718-31	s INDUCTOR, CHIP 120uH
L16	1-410-718-31	s INDUCTOR, CHIP 120uH
L17	1-410-718-31	s INDUCTOR, CHIP 120uH
L19	1-410-718-31	s INDUCTOR, CHIP 120uH
L20	1-410-718-31	s INDUCTOR, CHIP 120uH
L22	1-410-718-31	s INDUCTOR, CHIP 120uH
Q1	8-729-175-73	s TRANSISTOR 2SC2757
Q2	8-729-112-65	s TRANSISTOR 2SA1462
Q3	8-729-175-73	s TRANSISTOR 2SC2757

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q4	8-729-112-65	s TRANSISTOR 2SA1462
Q5	8-729-175-73	s TRANSISTOR 2SC2757
Q6	8-729-112-65	s TRANSISTOR 2SA1462
Q7	8-729-175-73	s TRANSISTOR 2SC2757
Q8	8-729-112-65	s TRANSISTOR 2SA1462
Q9	8-729-175-73	s TRANSISTOR 2SC2757
Q10	8-729-112-65	s TRANSISTOR 2SA1462
Q11	8-729-175-73	s TRANSISTOR 2SC2757
Q12	8-729-112-65	s TRANSISTOR 2SA1462
Q13	8-729-175-73	s TRANSISTOR 2SC2757
Q14	8-729-112-65	s TRANSISTOR 2SA1462
Q15	8-729-175-73	s TRANSISTOR 2SC2757
Q16	8-729-112-65	s TRANSISTOR 2SA1462
Q17	8-729-175-73	s TRANSISTOR 2SC2757
Q18	8-729-112-65	s TRANSISTOR 2SA1462
Q19	8-729-175-73	s TRANSISTOR 2SC2757
Q20	8-729-112-65	s TRANSISTOR 2SA1462
Q21	8-729-112-65	s TRANSISTOR 2SA1462
Q22	8-729-175-73	s TRANSISTOR 2SC2757
Q23	8-729-112-65	s TRANSISTOR 2SA1462
Q24	8-729-175-73	s TRANSISTOR 2SC2757
Q25	8-729-175-73	s TRANSISTOR 2SC2757
Q26	8-729-112-65	s TRANSISTOR 2SA1462
Q27	8-729-112-65	s TRANSISTOR 2SA1462
Q28	8-729-175-73	s TRANSISTOR 2SC2757
Q29	8-729-112-65	s TRANSISTOR 2SA1462
Q30	8-729-112-65	s TRANSISTOR 2SA1462
Q31	8-729-112-65	s TRANSISTOR 2SA1462
Q32	8-729-175-73	s TRANSISTOR 2SC2757
Q33	8-729-175-73	s TRANSISTOR 2SC2757
Q34	8-729-175-73	s TRANSISTOR 2SC2757
Q35	8-729-175-73	s TRANSISTOR 2SC2757
Q36	8-729-175-73	s TRANSISTOR 2SC2757
Q37	8-729-100-66	s TRANSISTOR 2SC1623
Q38	8-729-116-64	s TRANSISTOR 2SK508-K51
Q39	8-729-112-65	s TRANSISTOR 2SA1462
Q42	8-729-216-22	s TRANSISTOR 2SA1162
Q44	8-729-175-73	s TRANSISTOR 2SC2757
Q45	8-729-112-65	s TRANSISTOR 2SA1462
Q46	8-729-112-65	s TRANSISTOR 2SA1462
Q47	8-729-175-73	s TRANSISTOR 2SC2757
Q48	8-729-112-65	s TRANSISTOR 2SA1462
Q49	8-729-112-65	s TRANSISTOR 2SA1462
Q50	8-729-112-65	s TRANSISTOR 2SA1462
Q51	8-729-175-73	s TRANSISTOR 2SC2757
Q52	8-729-175-73	s TRANSISTOR 2SC2757
Q53	8-729-175-73	s TRANSISTOR 2SC2757
Q54	8-729-175-73	s TRANSISTOR 2SC2757
Q55	8-729-175-73	s TRANSISTOR 2SC2757
Q56	8-729-100-66	s TRANSISTOR 2SC1623
Q57	8-729-116-64	s TRANSISTOR 2SK508-K51
Q58	8-729-112-65	s TRANSISTOR 2SA1462
Q61	8-729-216-22	s TRANSISTOR 2SA1162
Q63	8-729-175-73	s TRANSISTOR 2SC2757
Q64	8-729-112-65	s TRANSISTOR 2SA1462
Q65	8-729-112-65	s TRANSISTOR 2SA1462
Q66	8-729-175-73	s TRANSISTOR 2SC2757
Q67	8-729-112-65	s TRANSISTOR 2SA1462
Q68	8-729-112-65	s TRANSISTOR 2SA1462

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## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q69	8-729-175-73 s	TRANSISTOR 2SC2757
Q70	8-729-175-73 s	TRANSISTOR 2SC2757
Q71	8-729-112-65 s	TRANSISTOR 2SA1462
Q72	8-729-112-65 s	TRANSISTOR 2SA1462
Q73	8-729-175-73 s	TRANSISTOR 2SC2757
Q74	8-729-112-65 s	TRANSISTOR 2SA1462
Q75	8-729-112-65 s	TRANSISTOR 2SA1462
Q76	8-729-175-73 s	TRANSISTOR 2SC2757
Q77	8-729-112-65 s	TRANSISTOR 2SA1462
Q78	8-729-112-65 s	TRANSISTOR 2SA1462
Q79	8-729-112-65 s	TRANSISTOR 2SA1462
Q80	8-729-175-73 s	TRANSISTOR 2SC2757
Q81	8-729-175-73 s	TRANSISTOR 2SC2757
Q82	8-729-175-73 s	TRANSISTOR 2SC2757
Q83	8-729-175-73 s	TRANSISTOR 2SC2757
Q84	8-729-175-73 s	TRANSISTOR 2SC2757
Q85	8-729-100-66 s	TRANSISTOR 2SC1623
Q86	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q87	8-729-112-65 s	TRANSISTOR 2SA1462
Q90	8-729-216-22 s	TRANSISTOR 2SA1162
Q92	8-729-175-73 s	TRANSISTOR 2SC2757
Q93	8-729-112-65 s	TRANSISTOR 2SA1462
Q94	8-729-112-65 s	TRANSISTOR 2SA1462
Q95	8-729-175-73 s	TRANSISTOR 2SC2757
Q96	8-729-112-65 s	TRANSISTOR 2SA1462
Q97	8-729-112-65 s	TRANSISTOR 2SA1462
Q98	8-729-175-73 s	TRANSISTOR 2SC2757
Q99	8-729-175-73 s	TRANSISTOR 2SC2757
Q100	8-729-112-65 s	TRANSISTOR 2SA1462
Q101	8-729-112-65 s	TRANSISTOR 2SA1462
Q102	8-729-175-73 s	TRANSISTOR 2SC2757
Q103	8-729-112-65 s	TRANSISTOR 2SA1462
Q104	8-729-112-65 s	TRANSISTOR 2SA1462
Q105	8-729-175-73 s	TRANSISTOR 2SC2757
Q106	8-729-112-65 s	TRANSISTOR 2SA1462
Q107	8-729-112-65 s	TRANSISTOR 2SA1462
Q108	8-729-112-65 s	TRANSISTOR 2SA1462
Q109	8-729-175-73 s	TRANSISTOR 2SC2757
Q110	8-729-175-73 s	TRANSISTOR 2SC2757
Q111	8-729-175-73 s	TRANSISTOR 2SC2757
Q112	8-729-175-73 s	TRANSISTOR 2SC2757
Q113	8-729-175-73 s	TRANSISTOR 2SC2757
Q114	8-729-100-66 s	TRANSISTOR 2SC1623
Q115	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q116	8-729-112-65 s	TRANSISTOR 2SA1462
Q119	8-729-216-22 s	TRANSISTOR 2SA1162
Q121	8-729-175-73 s	TRANSISTOR 2SC2757
Q122	8-729-175-73 s	TRANSISTOR 2SC2757
Q123	8-729-175-73 s	TRANSISTOR 2SC2757
Q124	8-729-175-73 s	TRANSISTOR 2SC2757
Q125	8-729-175-73 s	TRANSISTOR 2SC2757
Q126	8-729-100-66 s	TRANSISTOR 2SC1623
Q127	8-729-216-22 s	TRANSISTOR 2SA1162
Q128	8-729-100-66 s	TRANSISTOR 2SC1623
Q129	8-729-216-22 s	TRANSISTOR 2SA1162
Q130	8-729-175-73 s	TRANSISTOR 2SC2757
Q131	8-729-100-66 s	TRANSISTOR 2SC1623
Q132	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q133	8-729-216-22 s	TRANSISTOR 2SA1162

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q134	8-729-175-73 s	TRANSISTOR 2SC2757
Q135	8-729-100-66 s	TRANSISTOR 2SC1623
Q136	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q137	8-729-216-22 s	TRANSISTOR 2SA1162
Q138	8-729-175-73 s	TRANSISTOR 2SC2757
Q139	8-729-175-73 s	TRANSISTOR 2SC2757
Q140	8-729-175-73 s	TRANSISTOR 2SC2757
Q141	8-729-175-73 s	TRANSISTOR 2SC2757
Q142	8-729-112-65 s	TRANSISTOR 2SA1462
Q143	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q144	8-729-175-73 s	TRANSISTOR 2SC2757
Q145	8-729-112-65 s	TRANSISTOR 2SA1462
Q146	8-729-175-73 s	TRANSISTOR 2SC2757
Q147	8-729-175-73 s	TRANSISTOR 2SC2757
Q148	8-729-175-73 s	TRANSISTOR 2SC2757
Q149	8-729-175-73 s	TRANSISTOR 2SC2757
Q150	8-729-112-65 s	TRANSISTOR 2SA1462
Q151	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q152	8-729-175-73 s	TRANSISTOR 2SC2757
Q153	8-729-112-65 s	TRANSISTOR 2SA1462
Q154	8-729-100-66 s	TRANSISTOR 2SC1623
Q155	8-729-216-22 s	TRANSISTOR 2SA1162
Q156	8-729-100-66 s	TRANSISTOR 2SC1623
Q157	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q158	8-729-112-65 s	TRANSISTOR 2SA1462
Q159	8-729-112-65 s	TRANSISTOR 2SA1462
Q160	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q161	8-729-100-66 s	TRANSISTOR 2SC1623
Q162	8-729-175-73 s	TRANSISTOR 2SC2757
Q163	8-729-175-73 s	TRANSISTOR 2SC2757
Q164	8-729-175-73 s	TRANSISTOR 2SC2757
Q165	8-729-175-73 s	TRANSISTOR 2SC2757
Q168	8-729-175-73 s	TRANSISTOR 2SC2757
Q169	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q170	8-729-175-73 s	TRANSISTOR 2SC2757
Q171	8-729-175-73 s	TRANSISTOR 2SC2757
Q172	8-729-112-65 s	TRANSISTOR 2SA1462
Q173	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q174	8-729-112-65 s	TRANSISTOR 2SA1462
Q175	8-729-112-65 s	TRANSISTOR 2SA1462
Q176	8-729-175-73 s	TRANSISTOR 2SC2757
Q177	8-729-175-73 s	TRANSISTOR 2SC2757
Q178	8-729-112-65 s	TRANSISTOR 2SA1462
Q179	8-729-100-66 s	TRANSISTOR 2SC1623
Q180	8-729-112-65 s	TRANSISTOR 2SA1462
Q181	8-729-112-65 s	TRANSISTOR 2SA1462
Q182	8-729-175-73 s	TRANSISTOR 2SC2757
Q183	8-729-175-73 s	TRANSISTOR 2SC2757
Q184	8-729-175-73 s	TRANSISTOR 2SC2757
Q185	8-729-100-66 s	TRANSISTOR 2SC1623
Q186	8-729-100-66 s	TRANSISTOR 2SC1623
Q187	8-729-100-66 s	TRANSISTOR 2SC1623
Q189	8-729-216-22 s	TRANSISTOR 2SA1162
Q190	8-729-216-22 s	TRANSISTOR 2SA1162
Q191	8-729-216-22 s	TRANSISTOR 2SA1162
Q193	8-729-175-73 s	TRANSISTOR 2SC2757
Q194	8-729-175-73 s	TRANSISTOR 2SC2757
Q195	8-729-112-65 s	TRANSISTOR 2SA1462
Q196	8-729-116-64 s	TRANSISTOR 2SK508-K51

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q197	8-729-175-73 s	TRANSISTOR 2SC2757
Q198	8-729-112-65 s	TRANSISTOR 2SA1462
Q199	8-729-175-73 s	TRANSISTOR 2SC2757
Q200	8-729-112-65 s	TRANSISTOR 2SA1462
Q201	8-729-112-65 s	TRANSISTOR 2SA1462
Q202	8-729-175-73 s	TRANSISTOR 2SC2757
Q203	8-729-112-65 s	TRANSISTOR 2SA1462
Q204	8-729-112-65 s	TRANSISTOR 2SA1462
Q205	8-729-112-65 s	TRANSISTOR 2SA1462
Q206	8-729-112-65 s	TRANSISTOR 2SA1462
Q207	8-729-175-73 s	TRANSISTOR 2SC2757
Q208	8-729-175-73 s	TRANSISTOR 2SC2757
Q209	8-729-175-73 s	TRANSISTOR 2SC2757
Q210	8-729-175-73 s	TRANSISTOR 2SC2757
Q211	8-729-100-66 s	TRANSISTOR 2SC1623
Q212	8-729-100-66 s	TRANSISTOR 2SC1623
Q213	8-729-216-22 s	TRANSISTOR 2SA1162
Q214	8-729-216-22 s	TRANSISTOR 2SA1162
Q215	8-729-216-22 s	TRANSISTOR 2SA1162
Q216	8-729-216-22 s	TRANSISTOR 2SA1162
Q217	8-729-100-66 s	TRANSISTOR 2SC1623
Q218	8-729-216-22 s	TRANSISTOR 2SA1162
Q219	8-729-216-22 s	TRANSISTOR 2SA1162
Q220	8-729-100-66 s	TRANSISTOR 2SC1623
Q221	8-729-216-22 s	TRANSISTOR 2SA1162
Q222	8-729-216-22 s	TRANSISTOR 2SA1162
Q223	8-729-100-66 s	TRANSISTOR 2SC1623
Q224	8-729-216-22 s	TRANSISTOR 2SA1162
Q225	8-729-216-22 s	TRANSISTOR 2SA1162
Q226	8-729-100-66 s	TRANSISTOR 2SC1623
Q227	8-729-216-22 s	TRANSISTOR 2SA1162
Q228	8-729-216-22 s	TRANSISTOR 2SA1162
Q229	8-729-175-73 s	TRANSISTOR 2SC2757
Q230	8-729-100-66 s	TRANSISTOR 2SC1623
Q231	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q232	8-729-216-22 s	TRANSISTOR 2SA1162
Q234	8-729-112-65 s	TRANSISTOR 2SA1462
Q235	8-729-175-73 s	TRANSISTOR 2SC2757
Q237	8-729-175-73 s	TRANSISTOR 2SC2757
Q238	8-729-175-73 s	TRANSISTOR 2SC2757
Q240	8-729-112-65 s	TRANSISTOR 2SA1462
Q241	8-729-112-65 s	TRANSISTOR 2SA1462
Q242	8-729-175-73 s	TRANSISTOR 2SC2757
Q243	8-729-175-73 s	TRANSISTOR 2SC2757
Q244	8-729-175-73 s	TRANSISTOR 2SC2757
Q245	8-729-175-73 s	TRANSISTOR 2SC2757
Q246	8-729-175-73 s	TRANSISTOR 2SC2757
Q247	8-729-175-73 s	TRANSISTOR 2SC2757
Q248	8-729-175-73 s	TRANSISTOR 2SC2757
Q249	8-729-175-73 s	TRANSISTOR 2SC2757
Q250	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q251	8-729-112-65 s	TRANSISTOR 2SA1462
R362	1-216-309-00 s	METAL 5.6 5% 1/10W
R363	1-216-309-00 s	METAL 5.6 5% 1/10W
R364	1-215-394-00 s	METAL 75 1% 1/6W
R608	1-216-309-00 s	METAL 5.6 5% 1/10W
R609	1-216-309-00 s	METAL 5.6 5% 1/10W
R610	1-216-309-00 s	METAL 5.6 5% 1/10W

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R611	1-216-309-00 s	METAL 5.6 5% 1/10W
R612	1-215-394-00 s	METAL 75 1% 1/6W
R613	1-215-394-00 s	METAL 75 1% 1/6W
R614	1-215-394-00 s	METAL 75 1% 1/6W
R680	1-216-309-00 s	METAL 5.6 5% 1/10W
R681	1-216-309-00 s	METAL 5.6 5% 1/10W
R682	1-215-394-00 s	METAL 75 1% 1/6W
R780	1-216-615-11 s	METAL, CHIP 33 0.5% 1/10W
R781	1-216-615-11 s	METAL, CHIP 33 0.5% 1/10W
R900	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R902	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R904	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R906	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R908	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R910	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R912	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R914	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R962	1-249-418-11 s	CARBON 1.2K 5% 1/4W
R963	1-249-418-11 s	CARBON 1.2K 5% 1/4W
RV1	1-237-032-11 s	RES, ADJ, METAL 500
RV2	1-237-032-11 s	RES, ADJ, METAL 500
RV3	1-237-036-11 s	RES, ADJ, METAL 10K
RV5	1-237-037-11 s	RES, ADJ, METAL 20K
RV6	1-237-032-11 s	RES, ADJ, METAL 500
RV7	1-237-032-11 s	RES, ADJ, METAL 500
RV8	1-237-036-11 s	RES, ADJ, METAL 10K
RV10	1-237-037-11 s	RES, ADJ, METAL 20K
RV11	1-237-032-11 s	RES, ADJ, METAL 500
RV12	1-237-032-11 s	RES, ADJ, METAL 500
RV15	1-237-037-11 s	RES, ADJ, METAL 20K
RV16	1-237-032-11 s	RES, ADJ, METAL 500
RV17	1-237-032-11 s	RES, ADJ, METAL 500
RV20	1-237-037-11 s	RES, ADJ, METAL 20K
RV21	1-237-032-11 s	RES, ADJ, METAL 500
RV23	1-237-032-11 s	RES, ADJ, METAL 500
RV24	1-237-037-11 s	RES, ADJ, METAL 20K
RV25	1-237-032-11 s	RES, ADJ, METAL 500
RV26	1-237-037-11 s	RES, ADJ, METAL 20K
RV27	1-237-031-11 s	RES, ADJ, METAL 200
RV28	1-237-035-11 s	RES, ADJ, METAL 5K
RV30	1-237-034-11 s	RES, ADJ, METAL 2K
RV31	1-237-033-11 s	RES, ADJ, METAL 1K
RV32	1-237-036-11 s	RES, ADJ, METAL 10K
RV33	1-237-031-11 s	RES, ADJ, METAL 200
RV34	1-237-035-11 s	RES, ADJ, METAL 5K
RV36	1-237-034-11 s	RES, ADJ, METAL 2K
RV37	1-237-033-11 s	RES, ADJ, METAL 1K
RV38	1-237-036-11 s	RES, ADJ, METAL 10K
RV39	1-237-032-11 s	RES, ADJ, METAL 500
RV40	1-237-032-11 s	RES, ADJ, METAL 500
RV42	1-237-032-11 s	RES, ADJ, METAL 500
RV43	1-237-032-11 s	RES, ADJ, METAL 500
RV44	1-237-030-11 s	RES, ADJ, CERMET 100
RV45	1-237-034-11 s	RES, ADJ, METAL 2K
RV46	1-237-035-11 s	RES, ADJ, METAL 5K
RV47	1-237-035-11 s	RES, ADJ, METAL 5K
RV48	1-237-034-11 s	RES, ADJ, METAL 2K
RV49	1-237-033-11 s	RES, ADJ, METAL 1K
RV50	1-237-034-11 s	RES, ADJ, METAL 2K

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (EF-20C BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV51	1-237-033-11	s RES, ADJ, METAL 1K
RV52	1-237-033-11	s RES, ADJ, METAL 1K
RV53	1-237-033-11	s RES, ADJ, METAL 1K
RV54	1-237-498-21	s RES, ADJ, CERMET 200
RV55	1-237-032-11	s RES, ADJ, METAL 500
RV56	1-237-035-11	s RES, ADJ, METAL 5K
RV57	1-237-034-11	s RES, ADJ, METAL 2K
RV58	1-237-033-11	s RES, ADJ, METAL 1K
RV59	1-237-033-11	s RES, ADJ, METAL 1K
RV60	1-237-498-21	s RES, ADJ, CERMET 200
RV61	1-237-029-11	s RES, ADJ, METAL 50
RV62	1-237-032-11	s RES, ADJ, METAL 500
RV64	1-237-030-11	s RES, ADJ, CERMET 100
RV65	1-237-037-11	s RES, ADJ, METAL 20K
RV66	1-237-037-11	s RES, ADJ, METAL 20K
RV67	1-237-037-11	s RES, ADJ, METAL 20K
RV68	1-237-037-11	s RES, ADJ, METAL 20K
RV69	1-237-037-11	s RES, ADJ, METAL 20K
RV70	1-237-037-11	s RES, ADJ, METAL 20K
RV71	1-237-030-11	s RES, ADJ, CERMET 100

## DUS-312 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-632-548-11	o PRINTED CIRCUIT BOARD, DUS-312
2pcs	3-659-757-00	s SPACER (4X8.5)
2pcs	7-682-952-01	s SCREW +PSW 3X16
2pcs	7-684-023-04	s N 3, TYPE 2
IC1081	8-759-990-82	s IC TL082CP
R1001	1-215-433-00	s METAL 3.3K 1% 1/6W
R1002	1-215-445-00	s METAL 10K 1% 1/6W
R1003	1-215-469-00	s METAL 100K 1% 1/6W
S1001	1-554-295-00	s SWITCH, SLIDE
VR1081	1-237-503-21	s RES, ADJ, METAL 10K

## SD-19 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-252-A	o MOUNTED CIRCUIT BOARD, SD-19 (P)
18pcs	1-563-521-11	o CONNECTOR, 20P, FEMALE
1pc	2-139-140-01	o PLATE, SHIELD
2pcs	2-182-909-01	o LEVER, PC BOARD
4pcs	3-621-124-00	o SPACER
2pcs	7-626-320-11	o PIN, SPRING 3X8
1pc	7-682-947-01	s SCREW +PSW 3X6
6pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-131-353-00	s TANTALUM 10uF 10% 35V
C2	1-131-353-00	s TANTALUM 10uF 10% 35V
C3	1-131-353-00	s TANTALUM 10uF 10% 35V
C4	1-131-353-00	s TANTALUM 10uF 10% 35V
C6	1-124-589-11	s ELECT 47uF 20% 16V
C9	1-124-589-11	s ELECT 47uF 20% 16V
C12	1-107-210-00	s MICA 22PF 5% 500V
C17	1-107-085-00	s MICA 100PF 5% 50V
C20	1-107-085-00	s MICA 100PF 5% 50V
C22	1-131-353-00	s TANTALUM 10uF 10% 35V
C23	1-126-160-11	s ELECT 1uF 20% 50V
C24	1-131-353-00	s TANTALUM 10uF 10% 35V
C26	1-124-589-11	s ELECT 47uF 20% 16V
C27	1-109-539-00	s MICA 150PF 5% 100V
C29	1-124-589-11	s ELECT 47uF 20% 16V
C30	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C31	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C32	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C33	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C34	1-124-589-11	s ELECT 47uF 20% 16V
C37	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C38	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C42	1-131-353-00	s TANTALUM 10uF 10% 35V
C43	1-131-353-00	s TANTALUM 10uF 10% 35V
C48	1-107-075-00	s MICA 39PF 5% 50V
C49	1-107-049-00	s MICA 8.2PF 500V
C53	1-107-085-00	s MICA 100PF 5% 50V
C54	1-107-085-00	s MICA 100PF 5% 50V
C65	1-131-353-00	s TANTALUM 10uF 10% 35V
C68	1-131-353-00	s TANTALUM 10uF 10% 35V
C71	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C77	1-124-589-11	s ELECT 47uF 20% 16V
C80	1-124-589-11	s ELECT 47uF 20% 16V
C82	1-124-589-11	s ELECT 47uF 20% 16V
C85	1-124-589-11	s ELECT 47uF 20% 16V
C87	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C88	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C89	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C90	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C92	1-124-589-11	s ELECT 47uF 20% 16V
C93	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C95	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C101	1-131-353-00	s TANTALUM 10uF 10% 35V
C102	1-131-353-00	s TANTALUM 10uF 10% 35V
C106	1-126-157-11	s ELECT 10uF 20% 16V
C107	1-131-353-00	s TANTALUM 10uF 10% 35V
C108	1-131-353-00	s TANTALUM 10uF 10% 35V
C109	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C118	1-107-085-00	s MICA 100PF 5% 50V
C122	1-131-353-00	s TANTALUM 10uF 10% 35V

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C123	1-131-353-00	s TANTALUM 10uF 10% 35V
C125	1-107-085-00	s MICA 100PF 5% 50V
C128	1-131-353-00	s TANTALUM 10uF 10% 35V
C129	1-131-353-00	s TANTALUM 10uF 10% 35V
C138	1-107-209-00	s MICA 20PF 5% 500V
C141	1-107-207-00	s MICA 16PF 5% 500V
C142	1-107-207-00	s MICA 16PF 5% 500V
C143	1-131-353-00	s TANTALUM 10uF 10% 35V
C145	1-107-085-00	s MICA 100PF 5% 50V
C151	1-131-353-00	s TANTALUM 10uF 10% 35V
C153	1-131-353-00	s TANTALUM 10uF 10% 35V
C160	1-124-589-11	s ELECT 47uF 20% 16V
C163	1-124-589-11	s ELECT 47uF 20% 16V
C165	1-124-589-11	s ELECT 47uF 20% 16V
C168	1-124-589-11	s ELECT 47uF 20% 16V
C170	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C171	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C172	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C173	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C174	1-124-589-11	s ELECT 47uF 20% 16V
C177	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C179	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C184	1-131-353-00	s TANTALUM 10uF 10% 35V
C185	1-131-353-00	s TANTALUM 10uF 10% 35V
C189	1-126-157-11	s ELECT 10uF 20% 16V
C190	1-131-353-00	s TANTALUM 10uF 10% 35V
C191	1-131-353-00	s TANTALUM 10uF 10% 35V
C210	1-131-353-00	s TANTALUM 10uF 10% 35V
C217	1-124-589-11	s ELECT 47uF 20% 16V
C220	1-124-589-11	s ELECT 47uF 20% 16V
C222	1-124-589-11	s ELECT 47uF 20% 16V
C225	1-124-589-11	s ELECT 47uF 20% 16V
C227	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C228	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C231	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C232	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C234	1-124-589-11	s ELECT 47uF 20% 16V
C236	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C238	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C243	1-131-353-00	s TANTALUM 10uF 10% 35V
C244	1-131-353-00	s TANTALUM 10uF 10% 35V
C248	1-126-157-11	s ELECT 10uF 20% 16V
C249	1-131-353-00	s TANTALUM 10uF 10% 35V
C250	1-131-353-00	s TANTALUM 10uF 10% 35V
C260	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C264	1-124-589-11	s ELECT 47uF 20% 16V
C267	1-124-589-11	s ELECT 47uF 20% 16V
C268	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C274	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C281	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C285	1-124-589-11	s ELECT 47uF 20% 16V
C287	1-124-589-11	s ELECT 47uF 20% 16V
C288	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C293	1-124-589-11	s ELECT 47uF 20% 16V
C295	1-124-589-11	s ELECT 47uF 20% 16V
C297	1-124-589-11	s ELECT 47uF 20% 16V
C314	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C323	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C325	1-162-638-11	s CERAMIC, CHIP 1uF 16V

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C332	1-124-589-11	s ELECT 47uF 20% 16V
C334	1-124-589-11	s ELECT 47uF 20% 16V
C337	1-124-589-11	s ELECT 47uF 20% 16V
C338	1-124-589-11	s ELECT 47uF 20% 16V
C341	1-124-589-11	s ELECT 47uF 20% 16V
C358	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C367	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C368	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C380	1-124-589-11	s ELECT 47uF 20% 16V
C382	1-124-589-11	s ELECT 47uF 20% 16V
C384	1-124-589-11	s ELECT 47uF 20% 16V
C386	1-124-589-11	s ELECT 47uF 20% 16V
C397	1-124-589-11	s ELECT 47uF 20% 16V
C398	1-124-589-11	s ELECT 47uF 20% 16V
C399	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C401	1-124-589-11	s ELECT 47uF 20% 16V
C403	1-124-589-11	s ELECT 47uF 20% 16V
C446	1-107-085-00	s MICA 100PF 5% 50V
C447	1-107-090-00	s MICA 160PF 5% 50V
C448	1-107-090-00	s MICA 160PF 5% 50V
C450	1-124-234-00	s ELECT 22uF 20% 16V
C483	1-124-589-11	s ELECT 47uF 20% 16V
C497	1-124-589-11	s ELECT 47uF 20% 16V
C512	1-126-157-11	s ELECT 10uF 20% 16V
C519	1-107-085-00	s MICA 100PF 5% 50V
C521	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C522	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C527	1-107-085-00	s MICA 100PF 5% 50V
C530	1-131-353-00	s TANTALUM 10uF 10% 35V
C537	1-131-353-00	s TANTALUM 10uF 10% 35V
C538	1-131-353-00	s TANTALUM 10uF 10% 35V
C540	1-131-353-00	s TANTALUM 10uF 10% 35V
C542	1-131-353-00	s TANTALUM 10uF 10% 35V
C547	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C570	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C581	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C586	1-131-353-00	s TANTALUM 10uF 10% 35V
C587	1-131-353-00	s TANTALUM 10uF 10% 35V
C590	1-131-353-00	s TANTALUM 10uF 10% 35V
C591	1-131-353-00	s TANTALUM 10uF 10% 35V
C596	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C597	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C598	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C610	1-107-085-00	s MICA 100PF 5% 50V
C627	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C640	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C644	1-107-157-00	s MICA 27PF 5% 500V
C645	1-107-157-00	s MICA 27PF 5% 500V
C646	1-107-157-00	s MICA 27PF 5% 500V
C647	1-107-157-00	s MICA 27PF 5% 500V
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
D1	8-719-100-03	s DIODE 1S2835
D2	8-719-100-05	s DIODE 1S2837
D3	8-719-800-76	s DIODE 1SS226
D4	8-719-800-76	s DIODE 1SS226
D5	8-719-800-76	s DIODE 1SS226

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
D6	8-719-800-76	s DIODE 1SS226
D7	8-719-109-93	s DIODE RD6.2ES-B2
D8	8-719-109-93	s DIODE RD6.2ES-B2
D9	8-719-800-76	s DIODE 1SS226
D10	8-719-800-76	s DIODE 1SS226
D11	8-719-800-76	s DIODE 1SS226
D12	8-719-800-76	s DIODE 1SS226
D13	8-719-800-76	s DIODE 1SS226
D14	8-719-800-76	s DIODE 1SS226
D15	8-719-800-76	s DIODE 1SS226
D16	8-719-109-93	s DIODE RD6.2ES-B2
D17	8-719-109-93	s DIODE RD6.2ES-B2
D18	8-719-800-76	s DIODE 1SS226
D20	8-719-109-93	s DIODE RD6.2ES-B2
D21	8-719-109-93	s DIODE RD6.2ES-B2
D22	8-719-800-76	s DIODE 1SS226
D24	8-719-800-76	s DIODE 1SS226
D25	8-719-102-51	s DIODE 1SZ51
D26	8-719-800-76	s DIODE 1SS226
D27	8-719-109-75	s DIODE RD4.3ES-B2
D28	8-719-800-76	s DIODE 1SS226
D30	8-719-800-76	s DIODE 1SS226
FL1	1-235-786-11	s FILTER, LOW PASS 3MHz
FL2	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL3	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL4	1-235-584-11	s FILTER, LOW PASS
FL5	1-235-786-11	s FILTER, LOW PASS 3MHz
FL6	1-235-584-11	s FILTER, LOW PASS
FL7	1-235-786-11	s FILTER, LOW PASS 3MHz
FL8	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL9	1-235-584-11	s FILTER, LOW PASS
FL11	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL20	1-235-584-11	s FILTER, LOW PASS
FL21	1-235-584-11	s FILTER, LOW PASS
FL22	1-235-584-11	s FILTER, LOW PASS
FL23	1-235-584-11	s FILTER, LOW PASS
FL24	1-235-584-11	s FILTER, LOW PASS
FL25	1-235-584-11	s FILTER, LOW PASS
FL26	1-235-584-11	s FILTER, LOW PASS
FL27	1-235-585-11	s FILTER, LOW PASS
FL28	1-235-585-11	s FILTER, LOW PASS
IC1	8-759-982-21	s IC RC78L05A
IC2	8-759-982-52	s IC RC79M05FA
IC3	8-759-114-06	s IC UPC814G2-1
IC4	8-759-008-74	s IC MC14001BF
IC5	8-759-200-79	s IC TC4049BF
IC6	8-749-900-77	s IC BX-1333L
IC7	8-759-906-59	s IC CX22017
IC8	8-759-908-17	s IC TL082CPS
IC9	8-759-200-79	s IC TC4049BF
IC10	8-759-009-07	s IC MC14053BF
IC11	8-759-908-17	s IC TL082CPS
IC12	8-759-908-17	s IC TL082CPS
IC13	8-759-908-17	s IC TL082CPS
IC14	8-759-602-06	s IC M5109P
IC15	8-759-602-06	s IC M5109P
IC16	8-759-906-59	s IC CX22017
IC17	8-759-702-07	s IC NJM13700M

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC18	8-759-009-67	s IC MC14584BF
IC19	8-759-009-07	s IC MC14053BF
IC20	8-759-009-67	s IC MC14584BF
IC21	8-759-908-17	s IC TL082CPS
IC22	8-759-908-17	s IC TL082CPS
IC23	8-759-908-17	s IC TL082CPS
IC24	8-759-602-06	s IC M5109P
IC25	8-759-602-06	s IC M5109P
IC26	8-759-906-59	s IC CX22017
IC27	8-759-009-07	s IC MC14053BF
IC28	8-759-908-17	s IC TL082CPS
IC29	8-759-908-17	s IC TL082CPS
IC30	8-759-908-17	s IC TL082CPS
IC31	8-759-602-06	s IC M5109P
IC32	8-759-602-06	s IC M5109P
IC33	8-759-906-59	s IC CX22017
IC34	8-759-009-06	s IC MC14052BF
IC35	8-759-702-07	s IC NJM13700M
IC36	8-759-009-07	s IC MC14053BF
IC37	8-759-009-06	s IC MC14052BF
IC38	8-759-702-07	s IC NJM13700M
IC39	8-759-908-17	s IC TL082CPS
IC40	8-759-009-07	s IC MC14053BF
IC41	8-741-100-42	s IC SBX1594-01
IC42	8-759-908-17	s IC TL082CPS
IC44	8-759-984-88	s IC LM6361M
IC45	8-759-984-88	s IC LM6361M
IC46	8-759-204-94	s IC TC74HC00F
IC47	8-741-100-42	s IC SBX1594-01
IC48	8-759-908-17	s IC TL082CPS
IC50	8-759-984-88	s IC LM6361M
IC51	8-759-984-88	s IC LM6361M
IC52	8-759-908-17	s IC TL082CPS
IC53	8-759-908-17	s IC TL082CPS
IC55	8-759-908-17	s IC TL082CPS
IC56	8-759-982-44	s IC RC79L05A
IC57	8-759-003-17	s IC LM317T
IC58	8-759-746-86	s IC 27C128-25
IC59	8-759-746-86	s IC 27C128-25
IC60	8-759-746-86	s IC 27C128-25
IC61	8-759-984-88	s IC LM6361M
IC62	8-759-984-88	s IC LM6361M
IC63	8-759-011-64	s IC MC74HC4052F
IC64	8-741-100-42	s IC SBX1594-01
IC65	8-741-100-42	s IC SBX1594-01
IC66	8-759-984-88	s IC LM6361M
IC67	8-759-984-88	s IC LM6361M
IC68	8-759-207-31	s IC TC74HC4028F
IC69	8-759-207-31	s IC TC74HC4028F
IC70	8-759-011-64	s IC MC74HC4052F
IC71	8-759-011-64	s IC MC74HC4052F
IC72	8-759-984-88	s IC LM6361M
IC73	8-759-011-64	s IC MC74HC4052F
IC74	8-741-100-42	s IC SBX1594-01
IC75	8-759-984-88	s IC LM6361M
IC76	8-759-011-65	s IC MC74HC4053F
IC77	8-759-011-64	s IC MC74HC4052F
IC78	8-741-100-42	s IC SBX1594-01
IC79	8-759-984-88	s IC LM6361M

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC80	8-759-011-64	s IC MC74HC4052F
IC81	8-741-100-42	s IC SBX1594-01
IC82	8-759-984-88	s IC LM6361M
IC83	8-759-011-64	s IC MC74HC4052F
IC84	8-741-100-42	s IC SBX1594-01
IC85	8-759-200-79	s IC TC4049BF
IC86	8-759-011-65	s IC MC74HC4053F
IC87	8-759-984-88	s IC LM6361M
IC88	8-759-011-65	s IC MC74HC4053F
IC89	8-741-100-42	s IC SBX1594-01
IC90	8-759-984-88	s IC LM6361M
IC91	8-759-984-88	s IC LM6361M
IC92	8-759-984-88	s IC LM6361M
IC95	8-759-984-88	s IC LM6361M
IC96	8-759-984-88	s IC LM6361M
IC97	8-759-200-79	s IC TC4049BF
IC98	8-759-982-20	s IC RC78L02A
IC99	8-759-200-79	s IC TC4049BF
IC101	8-759-982-20	s IC RC78L02A
IC102	8-759-984-88	s IC LM6361M
IC110	8-759-114-06	s IC UPC814G2-1
IC111	8-759-114-06	s IC UPC814G2-1
IC112	8-759-011-65	s IC MC74HC4053F
IC113	8-759-984-88	s IC LM6361M
IC115	8-759-009-07	s IC MC14053BF
IC120	8-759-009-67	s IC MC14584BF
IC121	8-759-702-07	s IC NJM13700M
IC122	8-759-982-21	s IC RC78L05A
IC123	8-759-982-44	s IC RC79L05A
IC125	8-759-114-06	s IC UPC814G2-1
JR5	1-216-295-00	s METAL, CHIP 0-OHM
L8	1-410-718-31	s INDUCTOR, CHIP 120uH
L11	1-410-718-31	s INDUCTOR, CHIP 120uH
L12	1-410-718-31	s INDUCTOR, CHIP 120uH
L16	1-410-718-31	s INDUCTOR, CHIP 120uH
L20	1-410-718-31	s INDUCTOR, CHIP 120uH
L23	1-410-723-61	s INDUCTOR CHIP 330uH
L28	1-410-711-31	s INDUCTOR CHIP 33uH
L30	1-410-718-31	s INDUCTOR, CHIP 120uH
L31	1-410-718-31	s INDUCTOR, CHIP 120uH
L33	1-410-714-31	s INDUCTOR CHIP 56uH
L34	1-410-714-31	s INDUCTOR CHIP 56uH
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-216-22	s TRANSISTOR 2SA1162
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-216-22	s TRANSISTOR 2SA1162
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-100-66	s TRANSISTOR 2SC1623
Q9	8-729-175-73	s TRANSISTOR 2SC2757
Q10	8-729-100-66	s TRANSISTOR 2SC1623
Q11	8-729-175-73	s TRANSISTOR 2SC2757
Q12	8-729-216-22	s TRANSISTOR 2SA1162
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-175-73	s TRANSISTOR 2SC2757
Q15	8-729-100-66	s TRANSISTOR 2SC1623

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q16	8-729-112-65	s TRANSISTOR 2SA1462
Q17	8-729-100-66	s TRANSISTOR 2SC1623
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-100-66	s TRANSISTOR 2SC1623
Q20	8-729-216-22	s TRANSISTOR 2SA1162
Q21	8-729-216-22	s TRANSISTOR 2SA1162
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-112-65	s TRANSISTOR 2SA1462
Q26	8-729-112-65	s TRANSISTOR 2SA1462
Q27	8-729-175-73	s TRANSISTOR 2SC2757
Q28	8-729-175-73	s TRANSISTOR 2SC2757
Q29	8-729-175-73	s TRANSISTOR 2SC2757
Q30	8-729-175-73	s TRANSISTOR 2SC2757
Q31	8-729-112-65	s TRANSISTOR 2SA1462
Q32	8-729-100-66	s TRANSISTOR 2SC1623
Q33	8-729-216-22	s TRANSISTOR 2SA1162
Q34	8-729-100-66	s TRANSISTOR 2SC1623
Q35	8-729-216-22	s TRANSISTOR 2SA1162
Q48	8-729-100-66	s TRANSISTOR 2SC1623
Q49	8-729-100-66	s TRANSISTOR 2SC1623
Q50	8-729-216-22	s TRANSISTOR 2SA1162
Q51	8-729-100-66	s TRANSISTOR 2SC1623
Q52	8-729-100-66	s TRANSISTOR 2SC1623
Q53	8-729-216-22	s TRANSISTOR 2SA1162
Q54	8-729-100-66	s TRANSISTOR 2SC1623
Q55	8-729-216-22	s TRANSISTOR 2SA1162
Q56	8-729-216-22	s TRANSISTOR 2SA1162
Q57	8-729-112-65	s TRANSISTOR 2SA1462
Q58	8-729-100-66	s TRANSISTOR 2SC1623
Q59	8-729-100-66	s TRANSISTOR 2SC1623
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-175-73	s TRANSISTOR 2SC2757
Q62	8-729-175-73	s TRANSISTOR 2SC2757
Q63	8-729-100-66	s TRANSISTOR 2SC1623
Q64	8-729-175-73	s TRANSISTOR 2SC2757
Q65	8-729-175-73	s TRANSISTOR 2SC2757
Q66	8-729-100-66	s TRANSISTOR 2SC1623
Q67	8-729-100-66	s TRANSISTOR 2SC1623
Q68	8-729-175-73	s TRANSISTOR 2SC2757
Q69	8-729-100-66	s TRANSISTOR 2SC1623
Q70	8-729-175-73	s TRANSISTOR 2SC2757
Q71	8-729-216-22	s TRANSISTOR 2SA1162
Q72	8-729-216-22	s TRANSISTOR 2SA1162
Q73	8-729-100-66	s TRANSISTOR 2SC1623
Q74	8-729-100-66	s TRANSISTOR 2SC1623
Q75	8-729-100-66	s TRANSISTOR 2SC1623
Q76	8-729-100-66	s TRANSISTOR 2SC1623
Q77	8-729-175-73	s TRANSISTOR 2SC2757
Q78	8-729-175-73	s TRANSISTOR 2SC2757
Q79	8-729-175-73	s TRANSISTOR 2SC2757
Q80	8-729-100-66	s TRANSISTOR 2SC1623
Q81	8-729-116-64	s TRANSISTOR 2SK508-K51
Q82	8-729-112-65	s TRANSISTOR 2SA1462
Q83	8-729-216-22	s TRANSISTOR 2SA1162
Q84	8-729-175-73	s TRANSISTOR 2SC2757
Q85	8-729-216-22	s TRANSISTOR 2SA1162
Q86	8-729-216-22	s TRANSISTOR 2SA1162

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q87	8-729-100-66 s	TRANSISTOR 2SC1623
Q88	8-729-100-66 s	TRANSISTOR 2SC1623
Q89	8-729-100-66 s	TRANSISTOR 2SC1623
Q90	8-729-100-66 s	TRANSISTOR 2SC1623
Q91	8-729-216-22 s	TRANSISTOR 2SA1162
Q92	8-729-216-22 s	TRANSISTOR 2SA1162
Q93	8-729-216-22 s	TRANSISTOR 2SA1162
Q94	8-729-216-22 s	TRANSISTOR 2SA1162
Q95	8-729-100-66 s	TRANSISTOR 2SC1623
Q96	8-729-216-22 s	TRANSISTOR 2SA1162
Q97	8-729-100-66 s	TRANSISTOR 2SC1623
Q98	8-729-100-66 s	TRANSISTOR 2SC1623
Q99	8-729-216-22 s	TRANSISTOR 2SA1162
Q100	8-729-100-66 s	TRANSISTOR 2SC1623
Q101	8-729-216-22 s	TRANSISTOR 2SA1162
Q102	8-729-100-66 s	TRANSISTOR 2SC1623
Q103	8-729-100-66 s	TRANSISTOR 2SC1623
Q104	8-729-175-73 s	TRANSISTOR 2SC2757
Q105	8-729-100-66 s	TRANSISTOR 2SC1623
Q106	8-729-100-66 s	TRANSISTOR 2SC1623
Q107	8-729-175-73 s	TRANSISTOR 2SC2757
Q108	8-729-216-22 s	TRANSISTOR 2SA1162
Q109	8-729-100-66 s	TRANSISTOR 2SC1623
Q110	8-729-216-22 s	TRANSISTOR 2SA1162
Q111	8-729-100-66 s	TRANSISTOR 2SC1623
Q113	8-729-100-66 s	TRANSISTOR 2SC1623
Q114	8-729-100-66 s	TRANSISTOR 2SC1623
Q115	8-729-216-22 s	TRANSISTOR 2SA1162
Q116	8-729-216-22 s	TRANSISTOR 2SA1162
Q117	8-729-100-66 s	TRANSISTOR 2SC1623
Q119	8-729-216-22 s	TRANSISTOR 2SA1162
Q120	8-729-216-22 s	TRANSISTOR 2SA1162
Q121	8-729-216-22 s	TRANSISTOR 2SA1162
Q122	8-729-216-22 s	TRANSISTOR 2SA1162
Q123	8-729-100-66 s	TRANSISTOR 2SC1623
Q124	8-729-100-66 s	TRANSISTOR 2SC1623
Q125	8-729-100-66 s	TRANSISTOR 2SC1623
Q126	8-729-100-66 s	TRANSISTOR 2SC1623
Q127	8-729-175-73 s	TRANSISTOR 2SC2757
Q128	8-729-175-73 s	TRANSISTOR 2SC2757
Q129	8-729-175-73 s	TRANSISTOR 2SC2757
Q130	8-729-100-66 s	TRANSISTOR 2SC1623
Q131	8-729-175-73 s	TRANSISTOR 2SC2757
Q132	8-729-175-73 s	TRANSISTOR 2SC2757
Q133	8-729-175-73 s	TRANSISTOR 2SC2757
Q134	8-729-100-66 s	TRANSISTOR 2SC1623
Q135	8-729-100-66 s	TRANSISTOR 2SC1623
Q136	8-729-175-73 s	TRANSISTOR 2SC2757
Q137	8-729-100-66 s	TRANSISTOR 2SC1623
Q138	8-729-175-73 s	TRANSISTOR 2SC2757
Q139	8-729-216-22 s	TRANSISTOR 2SA1162
Q140	8-729-216-22 s	TRANSISTOR 2SA1162
Q141	8-729-100-66 s	TRANSISTOR 2SC1623
Q142	8-729-100-66 s	TRANSISTOR 2SC1623
Q143	8-729-100-66 s	TRANSISTOR 2SC1623
Q144	8-729-100-66 s	TRANSISTOR 2SC1623
Q145	8-729-175-73 s	TRANSISTOR 2SC2757
Q147	8-729-175-73 s	TRANSISTOR 2SC2757
Q148	8-729-175-73 s	TRANSISTOR 2SC2757

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q149	8-729-100-66 s	TRANSISTOR 2SC1623
Q150	8-729-100-66 s	TRANSISTOR 2SC1623
Q151	8-729-216-22 s	TRANSISTOR 2SA1162
Q155	8-729-100-66 s	TRANSISTOR 2SC1623
Q156	8-729-216-22 s	TRANSISTOR 2SA1162
Q157	8-729-100-66 s	TRANSISTOR 2SC1623
Q158	8-729-216-22 s	TRANSISTOR 2SA1162
Q160	8-729-216-22 s	TRANSISTOR 2SA1162
Q161	8-729-216-22 s	TRANSISTOR 2SA1162
Q162	8-729-100-66 s	TRANSISTOR 2SC1623
Q169	8-729-100-66 s	TRANSISTOR 2SC1623
Q170	8-729-100-66 s	TRANSISTOR 2SC1623
Q171	8-729-175-73 s	TRANSISTOR 2SC2757
Q172	8-729-175-73 s	TRANSISTOR 2SC2757
Q173	8-729-100-66 s	TRANSISTOR 2SC1623
Q174	8-729-175-73 s	TRANSISTOR 2SC2757
Q175	8-729-175-73 s	TRANSISTOR 2SC2757
Q176	8-729-100-66 s	TRANSISTOR 2SC1623
Q177	8-729-100-66 s	TRANSISTOR 2SC1623
Q178	8-729-175-73 s	TRANSISTOR 2SC2757
Q179	8-729-100-66 s	TRANSISTOR 2SC1623
Q180	8-729-216-22 s	TRANSISTOR 2SA1162
Q181	8-729-100-66 s	TRANSISTOR 2SC1623
Q182	8-729-216-22 s	TRANSISTOR 2SA1162
Q183	8-729-100-66 s	TRANSISTOR 2SC1623
Q184	8-729-175-73 s	TRANSISTOR 2SC2757
Q185	8-729-216-22 s	TRANSISTOR 2SA1162
Q186	8-729-216-22 s	TRANSISTOR 2SA1162
Q187	8-729-100-66 s	TRANSISTOR 2SC1623
Q188	8-729-100-66 s	TRANSISTOR 2SC1623
Q189	8-729-100-66 s	TRANSISTOR 2SC1623
Q190	8-729-100-66 s	TRANSISTOR 2SC1623
Q191	8-729-175-73 s	TRANSISTOR 2SC2757
Q193	8-729-175-73 s	TRANSISTOR 2SC2757
Q194	8-729-175-73 s	TRANSISTOR 2SC2757
Q197	8-729-100-66 s	TRANSISTOR 2SC1623
Q198	8-729-100-66 s	TRANSISTOR 2SC1623
Q199	8-729-100-66 s	TRANSISTOR 2SC1623
Q200	8-729-100-66 s	TRANSISTOR 2SC1623
Q201	8-729-100-66 s	TRANSISTOR 2SC1623
Q202	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q203	8-729-216-22 s	TRANSISTOR 2SA1162
Q205	8-729-100-66 s	TRANSISTOR 2SC1623
Q206	8-729-100-66 s	TRANSISTOR 2SC1623
Q207	8-729-100-66 s	TRANSISTOR 2SC1623
Q208	8-729-100-66 s	TRANSISTOR 2SC1623
Q209	8-729-216-22 s	TRANSISTOR 2SA1162
Q210	8-729-100-66 s	TRANSISTOR 2SC1623
Q211	8-729-100-66 s	TRANSISTOR 2SC1623
Q212	8-729-100-66 s	TRANSISTOR 2SC1623
Q213	8-729-100-66 s	TRANSISTOR 2SC1623
Q214	8-729-100-66 s	TRANSISTOR 2SC1623
Q215	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q216	8-729-216-22 s	TRANSISTOR 2SA1162
Q218	8-729-100-66 s	TRANSISTOR 2SC1623
Q219	8-729-100-66 s	TRANSISTOR 2SC1623
Q220	8-729-100-66 s	TRANSISTOR 2SC1623
Q221	8-729-100-66 s	TRANSISTOR 2SC1623
Q222	8-729-100-66 s	TRANSISTOR 2SC1623

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q223	8-729-112-65 s	TRANSISTOR 2SA1462
Q224	8-729-216-22 s	TRANSISTOR 2SA1162
Q225	8-729-100-66 s	TRANSISTOR 2SC1623
Q226	8-729-112-65 s	TRANSISTOR 2SA1462
Q227	8-729-216-22 s	TRANSISTOR 2SA1162
Q228	8-729-100-66 s	TRANSISTOR 2SC1623
Q229	8-729-112-65 s	TRANSISTOR 2SA1462
Q230	8-729-216-22 s	TRANSISTOR 2SA1162
Q231	8-729-100-66 s	TRANSISTOR 2SC1623
Q232	8-729-112-65 s	TRANSISTOR 2SA1462
Q233	8-729-216-22 s	TRANSISTOR 2SA1162
Q234	8-729-100-66 s	TRANSISTOR 2SC1623
Q235	8-729-216-22 s	TRANSISTOR 2SA1162
Q236	8-729-216-22 s	TRANSISTOR 2SA1162
Q237	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q238	8-729-216-22 s	TRANSISTOR 2SA1162
Q239	8-729-100-66 s	TRANSISTOR 2SC1623
Q240	8-729-100-66 s	TRANSISTOR 2SC1623
Q241	8-729-216-22 s	TRANSISTOR 2SA1162
Q242	8-729-216-22 s	TRANSISTOR 2SA1162
Q243	8-729-112-65 s	TRANSISTOR 2SA1462
Q244	8-729-112-65 s	TRANSISTOR 2SA1462
Q245	8-729-112-65 s	TRANSISTOR 2SA1462
Q246	8-729-112-65 s	TRANSISTOR 2SA1462
Q247	8-729-175-73 s	TRANSISTOR 2SC2757
Q248	8-729-175-73 s	TRANSISTOR 2SC2757
Q249	8-729-175-73 s	TRANSISTOR 2SC2757
Q252	8-729-100-66 s	TRANSISTOR 2SC1623
Q253	8-729-112-65 s	TRANSISTOR 2SA1462
Q254	8-729-216-22 s	TRANSISTOR 2SA1162
Q255	8-729-100-66 s	TRANSISTOR 2SC1623
Q256	8-729-112-65 s	TRANSISTOR 2SA1462
Q257	8-729-216-22 s	TRANSISTOR 2SA1162
Q258	8-729-100-66 s	TRANSISTOR 2SC1623
Q259	8-729-112-65 s	TRANSISTOR 2SA1462
Q260	8-729-216-22 s	TRANSISTOR 2SA1162
Q261	8-729-100-66 s	TRANSISTOR 2SC1623
Q262	8-729-112-65 s	TRANSISTOR 2SA1462
Q263	8-729-216-22 s	TRANSISTOR 2SA1162
Q264	8-729-116-64 s	TRANSISTOR 2SK508-K51
Q265	8-729-216-22 s	TRANSISTOR 2SA1162
Q266	8-729-100-66 s	TRANSISTOR 2SC1623
Q267	8-729-100-66 s	TRANSISTOR 2SC1623
Q268	8-729-216-22 s	TRANSISTOR 2SA1162
Q269	8-729-216-22 s	TRANSISTOR 2SA1162
Q270	8-729-112-65 s	TRANSISTOR 2SA1462
Q271	8-729-112-65 s	TRANSISTOR 2SA1462
Q272	8-729-112-65 s	TRANSISTOR 2SA1462
Q273	8-729-112-65 s	TRANSISTOR 2SA1462
Q274	8-729-175-73 s	TRANSISTOR 2SC2757
Q275	8-729-175-73 s	TRANSISTOR 2SC2757
Q276	8-729-175-73 s	TRANSISTOR 2SC2757
Q277	8-729-140-96 s	TRANSISTOR 2SD774-4
Q278	8-729-100-66 s	TRANSISTOR 2SC1623
Q279	8-729-100-66 s	TRANSISTOR 2SC1623
Q280	8-729-100-66 s	TRANSISTOR 2SC1623
Q281	8-729-216-22 s	TRANSISTOR 2SA1162
Q285	8-729-216-22 s	TRANSISTOR 2SA1162
Q286	8-729-904-04 s	TRANSISTOR FMS2

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q287	8-729-907-47 s	TRANSISTOR IMZ1T108
Q288	8-729-907-47 s	TRANSISTOR IMZ1T108
Q289	8-729-903-82 s	TRANSISTOR FMW2
Q290	8-729-904-04 s	TRANSISTOR FMS2
Q291	8-729-907-47 s	TRANSISTOR IMZ1T108
Q292	8-729-907-47 s	TRANSISTOR IMZ1T108
Q293	8-729-903-82 s	TRANSISTOR FMW2
Q294	8-729-904-04 s	TRANSISTOR FMS2
Q295	8-729-907-47 s	TRANSISTOR IMZ1T108
Q296	8-729-907-47 s	TRANSISTOR IMZ1T108
Q297	8-729-903-82 s	TRANSISTOR FMW2
Q298	8-729-904-04 s	TRANSISTOR FMS2
Q299	8-729-907-47 s	TRANSISTOR IMZ1T108
Q300	8-729-907-47 s	TRANSISTOR IMZ1T108
Q301	8-729-903-82 s	TRANSISTOR FMW2
Q302	8-729-904-04 s	TRANSISTOR FMS2
Q303	8-729-907-47 s	TRANSISTOR IMZ1T108
Q304	8-729-907-47 s	TRANSISTOR IMZ1T108
Q305	8-729-903-82 s	TRANSISTOR FMW2
Q306	8-729-904-04 s	TRANSISTOR FMS2
Q307	8-729-907-47 s	TRANSISTOR IMZ1T108
Q308	8-729-907-47 s	TRANSISTOR IMZ1T108
Q309	8-729-903-82 s	TRANSISTOR FMW2
Q310	8-729-904-04 s	TRANSISTOR FMS2
Q311	8-729-907-47 s	TRANSISTOR IMZ1T108
Q312	8-729-907-47 s	TRANSISTOR IMZ1T108
Q313	8-729-903-82 s	TRANSISTOR FMW2
Q314	8-729-904-04 s	TRANSISTOR FMS2
Q315	8-729-907-47 s	TRANSISTOR IMZ1T108
Q316	8-729-907-47 s	TRANSISTOR IMZ1T108
Q317	8-729-903-82 s	TRANSISTOR FMW2
Q320	8-729-100-66 s	TRANSISTOR 2SC1623
Q321	8-729-100-66 s	TRANSISTOR 2SC1623
Q322	8-729-112-65 s	TRANSISTOR 2SA1462
Q323	8-729-100-66 s	TRANSISTOR 2SC1623
Q324	8-729-100-66 s	TRANSISTOR 2SC1623
Q325	8-729-100-66 s	TRANSISTOR 2SC1623
Q326	8-729-100-66 s	TRANSISTOR 2SC1623
Q327	8-729-100-66 s	TRANSISTOR 2SC1623
Q328	8-729-175-73 s	TRANSISTOR 2SC2757
Q329	8-729-175-73 s	TRANSISTOR 2SC2757
Q330	8-729-100-66 s	TRANSISTOR 2SC1623
Q331	8-729-100-66 s	TRANSISTOR 2SC1623
Q332	8-729-175-73 s	TRANSISTOR 2SC2757
Q333	8-729-175-73 s	TRANSISTOR 2SC2757
Q335	8-729-100-66 s	TRANSISTOR 2SC1623
Q336	8-729-216-22 s	TRANSISTOR 2SA1162
Q337	8-729-112-65 s	TRANSISTOR 2SA1462
Q338	8-729-100-66 s	TRANSISTOR 2SC1623
Q339	8-729-216-22 s	TRANSISTOR 2SA1162
Q340	8-729-112-65 s	TRANSISTOR 2SA1462
Q341	8-729-100-66 s	TRANSISTOR 2SC1623
Q342	8-729-216-22 s	TRANSISTOR 2SA1162
Q343	8-729-112-65 s	TRANSISTOR 2SA1462
Q344	8-729-100-66 s	TRANSISTOR 2SC1623
Q345	8-729-216-22 s	TRANSISTOR 2SA1162
Q346	8-729-112-65 s	TRANSISTOR 2SA1462
Q350	8-729-216-22 s	TRANSISTOR 2SA1162
Q360	8-729-175-73 s	TRANSISTOR 2SC2757

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q361	8-729-112-65	s TRANSISTOR 2SA1462
Q362	8-729-216-22	s TRANSISTOR 2SA1162
Q363	8-729-100-66	s TRANSISTOR 2SC1623
Q364	8-729-116-64	s TRANSISTOR 2SK508-K51
Q365	8-729-112-65	s TRANSISTOR 2SA1462
Q366	8-729-175-73	s TRANSISTOR 2SC2757
Q367	8-729-100-66	s TRANSISTOR 2SC1623
Q368	8-729-116-64	s TRANSISTOR 2SK508-K51
Q369	8-729-112-65	s TRANSISTOR 2SA1462
Q370	8-729-216-22	s TRANSISTOR 2SA1162
Q371	8-729-100-66	s TRANSISTOR 2SC1623
Q372	8-729-100-66	s TRANSISTOR 2SC1623
Q373	8-729-100-66	s TRANSISTOR 2SC1623
Q374	8-729-216-22	s TRANSISTOR 2SA1162
Q375	8-729-216-22	s TRANSISTOR 2SA1162
Q376	8-729-112-65	s TRANSISTOR 2SA1462
Q377	8-729-100-66	s TRANSISTOR 2SC1623
Q378	8-729-175-73	s TRANSISTOR 2SC2757
Q379	8-729-100-66	s TRANSISTOR 2SC1623
R82	1-216-309-00	s METAL 5.6 5% 1/10W
R83	1-216-309-00	s METAL 5.6 5% 1/10W
R84	1-216-309-00	s METAL 5.6 5% 1/10W
R85	1-216-309-00	s METAL 5.6 5% 1/10W
R86	1-215-394-00	s METAL 75 1% 1/6W
R87	1-215-394-00	s METAL 75 1% 1/6W
R102	1-215-394-00	s METAL 75 1% 1/6W
R103	1-215-394-00	s METAL 75 1% 1/6W
R155	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R167	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R329	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R341	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R447	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R459	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R656	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R721	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R819	1-216-113-00	s METAL, CHIP 470K 5% 1/10W
R1020	1-216-107-00	s METAL, CHIP 270K 5% 1/10W
R1024	1-216-621-11	s METAL 56 0.50% 1/10W
R1027	1-216-621-11	s METAL 56 0.50% 1/10W
R1088	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R1091	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R1107	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R1111	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R1150	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
RV1	1-237-501-21	s RES, ADJ, METAL 2K
RV2	1-237-037-11	s RES, ADJ, METAL 20K
RV4	1-237-036-11	s RES, ADJ, METAL 10K
RV5	1-237-036-11	s RES, ADJ, METAL 10K
RV6	1-237-037-11	s RES, ADJ, METAL 20K
RV7	1-237-036-11	s RES, ADJ, METAL 10K
RV8	1-237-501-21	s RES, ADJ, METAL 2K
RV9	1-237-032-11	s RES, ADJ, METAL 500
RV10	1-237-035-11	s RES, ADJ, METAL 5K
RV11	1-237-035-11	s RES, ADJ, METAL 5K
RV13	1-237-501-21	s RES, ADJ, METAL 2K
RV16	1-237-032-11	s RES, ADJ, METAL 500
RV17	1-237-033-11	s RES, ADJ, METAL 1K
RV18	1-237-037-11	s RES, ADJ, METAL 20K
RV19	1-237-037-11	s RES, ADJ, METAL 20K

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV20	1-237-037-11	s RES, ADJ, METAL 20K
RV21	1-237-037-11	s RES, ADJ, METAL 20K
RV23	1-237-033-11	s RES, ADJ, METAL 1K
RV24	1-237-035-11	s RES, ADJ, METAL 5K
RV25	1-237-033-11	s RES, ADJ, METAL 1K
RV26	1-237-035-11	s RES, ADJ, METAL 5K
RV27	1-237-035-11	s RES, ADJ, METAL 5K
RV28	1-237-035-11	s RES, ADJ, METAL 5K
RV30	1-237-032-11	s RES, ADJ, METAL 500
RV31	1-237-033-11	s RES, ADJ, METAL 1K
RV32	1-237-032-11	s RES, ADJ, METAL 500
RV34	1-237-036-11	s RES, ADJ, METAL 10K
RV35	1-237-037-11	s RES, ADJ, METAL 20K
RV36	1-237-034-11	s RES, ADJ, METAL 2K
RV37	1-237-036-11	s RES, ADJ, METAL 10K
RV38	1-237-036-11	s RES, ADJ, METAL 10K
RV39	1-237-033-11	s RES, ADJ, METAL 1K
RV40	1-237-032-11	s RES, ADJ, METAL 500
RV41	1-237-033-11	s RES, ADJ, METAL 1K
RV42	1-237-033-11	s RES, ADJ, METAL 1K
RV43	1-237-032-11	s RES, ADJ, METAL 500
RV44	1-237-036-11	s RES, ADJ, METAL 10K
RV45	1-237-037-11	s RES, ADJ, METAL 20K
RV46	1-237-033-11	s RES, ADJ, METAL 1K
RV47	1-237-035-11	s RES, ADJ, METAL 5K
RV48	1-237-033-11	s RES, ADJ, METAL 1K
RV49	1-237-035-11	s RES, ADJ, METAL 5K
RV50	1-237-035-11	s RES, ADJ, METAL 5K
RV51	1-237-035-11	s RES, ADJ, METAL 5K
RV53	1-237-032-11	s RES, ADJ, METAL 500
RV55	1-237-032-11	s RES, ADJ, METAL 500
RV56	1-237-036-11	s RES, ADJ, METAL 10K
RV57	1-237-036-11	s RES, ADJ, METAL 10K
RV60	1-237-033-11	s RES, ADJ, METAL 1K
RV61	1-237-033-11	s RES, ADJ, METAL 1K
RV62	1-237-033-11	s RES, ADJ, METAL 1K
RV63	1-237-035-11	s RES, ADJ, METAL 5K
RV64	1-237-033-11	s RES, ADJ, METAL 1K
RV65	1-237-035-11	s RES, ADJ, METAL 5K
RV66	1-237-035-11	s RES, ADJ, METAL 5K
RV67	1-237-033-11	s RES, ADJ, METAL 1K
RV68	1-237-033-11	s RES, ADJ, METAL 1K
RV69	1-237-035-11	s RES, ADJ, METAL 5K
RV71	1-237-032-11	s RES, ADJ, METAL 500
RV73	1-237-032-11	s RES, ADJ, METAL 500
RV75	1-237-039-11	s RES, ADJ, METAL 100K
RV76	1-237-033-11	s RES, ADJ, METAL 1K
RV77	1-237-039-11	s RES, ADJ, METAL 100K
RV78	1-237-037-11	s RES, ADJ, METAL 20K
RV79	1-237-039-11	s RES, ADJ, METAL 100K
RV80	1-237-033-11	s RES, ADJ, METAL 1K
RV81	1-237-037-11	s RES, ADJ, METAL 20K
RV82	1-237-032-11	s RES, ADJ, METAL 500
RV83	1-237-031-11	s RES, ADJ, METAL 200
RV84	1-237-032-11	s RES, ADJ, METAL 500
RV85	1-237-032-11	s RES, ADJ, METAL 500
RV86	1-237-039-11	s RES, ADJ, METAL 100K
RV87	1-237-032-11	s RES, ADJ, METAL 500
RV88	1-237-032-11	s RES, ADJ, METAL 500

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-19 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV89	1-237-031-11	s RES, ADJ, METAL 200
RV90	1-237-037-11	s RES, ADJ, METAL 20K
RV91	1-237-037-11	s RES, ADJ, METAL 20K
RV92	1-237-039-11	s RES, ADJ, METAL 100K
RV93	1-237-039-11	s RES, ADJ, METAL 100K
RV94	1-237-039-11	s RES, ADJ, METAL 100K
RV95	1-237-039-11	s RES, ADJ, METAL 100K
RV96	1-237-039-11	s RES, ADJ, METAL 100K
RV97	1-237-037-11	s RES, ADJ, METAL 20K
RV98	1-237-039-11	s RES, ADJ, METAL 100K
RV99	1-237-037-11	s RES, ADJ, METAL 20K
RV100	1-237-039-11	s RES, ADJ, METAL 100K
RV101	1-237-037-11	s RES, ADJ, METAL 20K
RV102	1-237-039-11	s RES, ADJ, METAL 100K
RV103	1-237-039-11	s RES, ADJ, METAL 100K
RV104	1-237-039-11	s RES, ADJ, METAL 100K
RV105	1-237-037-11	s RES, ADJ, METAL 20K
RV106	1-237-037-11	s RES, ADJ, METAL 20K
RV109	1-237-039-11	s RES, ADJ, METAL 100K
RV110	1-237-039-11	s RES, ADJ, METAL 100K
RV111	1-237-039-11	s RES, ADJ, METAL 100K
RV112	1-237-039-11	s RES, ADJ, METAL 100K
RV113	1-237-037-11	s RES, ADJ, METAL 20K
RV114	1-237-036-11	s RES, ADJ, METAL 10K
RV115	1-237-037-11	s RES, ADJ, METAL 20K
RV116	1-237-037-11	s RES, ADJ, METAL 20K
RV117	1-237-037-11	s RES, ADJ, METAL 20K
RV118	1-237-036-11	s RES, ADJ, METAL 10K
RV119	1-237-037-11	s RES, ADJ, METAL 20K
RV125	1-237-039-11	s RES, ADJ, METAL 100K
RV126	1-237-037-11	s RES, ADJ, METAL 20K
RV130	1-237-034-11	s RES, ADJ, METAL 2K
RV131	1-237-034-11	s RES, ADJ, METAL 2K
RV132	1-237-033-11	s RES, ADJ, METAL 1K
RV133	1-237-032-11	s RES, ADJ, METAL 500
RV134	1-237-035-11	s RES, ADJ, METAL 5K
S2	1-554-399-00	s SWITCH, TOGGLE
S4	1-554-399-00	s SWITCH, TOGGLE
S5	1-554-896-21	s SWITCH, SLIDE
S6	1-570-602-11	s SWITCH, DIP 2-CKT
S7	1-570-602-11	s SWITCH, DIP 2-CKT
S8	1-570-602-11	s SWITCH, DIP 2-CKT
S9	1-570-373-12	s SWITCH, SLIDE
S10	1-570-373-12	s SWITCH, SLIDE

## SD-20 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-250-A	o MOUNTED CIRCUIT BOARD, SD-20 (P)
2pcs	1-563-521-11	o CONNECTOR, 20P, FEMALE
1pc	2-139-140-01	o PLATE, SHIELD
1pc	2-182-909-01	o LEVER, PC BOARD
12pcs	3-621-124-00	o SPACER
1pc	7-626-320-11	o PIN, SPRING 3X8
2pcs	7-682-947-01	s SCREW +PSW 3X6
3pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C2	1-124-589-11	s ELECT 47uF 20% 16V
C3	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C5	1-124-589-11	s ELECT 47uF 20% 16V
C7	1-124-589-11	s ELECT 47uF 20% 16V
C11	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C20	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C22	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C24	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C27	1-124-589-11	s ELECT 47uF 20% 16V
C30	1-124-589-11	s ELECT 47uF 20% 16V
C36	1-124-589-11	s ELECT 47uF 20% 16V
C38	1-124-589-11	s ELECT 47uF 20% 16V
C40	1-124-589-11	s ELECT 47uF 20% 16V
C42	1-124-589-11	s ELECT 47uF 20% 16V
C48	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C57	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C62	1-124-589-11	s ELECT 47uF 20% 16V
C63	1-107-085-00	s MICA 100PF 5% 50V
C64	1-107-085-00	s MICA 100PF 5% 50V
C66	1-131-374-00	s TANTALUM 33uF 10% 16V
C67	1-131-374-00	s TANTALUM 33uF 10% 16V
C68	1-131-374-00	s TANTALUM 33uF 10% 16V
C69	1-131-374-00	s TANTALUM 33uF 10% 16V
C70	1-131-374-00	s TANTALUM 33uF 10% 16V
C71	1-131-374-00	s TANTALUM 33uF 10% 16V
C72	1-131-374-00	s TANTALUM 33uF 10% 16V
C73	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C74	1-126-157-11	s ELECT 10uF 20% 16V
C75	1-124-589-11	s ELECT 47uF 20% 16V
C77	1-124-589-11	s ELECT 47uF 20% 16V
C80	1-124-589-11	s ELECT 47uF 20% 16V
C83	1-124-589-11	s ELECT 47uF 20% 16V
C85	1-124-589-11	s ELECT 47uF 20% 16V
C86	1-107-202-00	s MICA 10PF 5% 500V
C87	1-107-085-00	s MICA 100PF 5% 50V
C88	1-107-209-00	s MICA 20PF 5% 500V
C95	1-124-589-11	s ELECT 47uF 20% 16V
C97	1-124-589-11	s ELECT 47uF 20% 16V
C99	1-124-589-11	s ELECT 47uF 20% 16V
C102	1-124-589-11	s ELECT 47uF 20% 16V
C104	1-124-589-11	s ELECT 47uF 20% 16V
C106	1-124-589-11	s ELECT 47uF 20% 16V
C107	1-107-209-00	s MICA 20PF 5% 500V
C111	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C116	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C117	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C120	1-124-589-11	s ELECT 47uF 20% 16V
C301	1-124-589-11	s ELECT 47uF 20% 16V
C303	1-124-589-11	s ELECT 47uF 20% 16V
C305	1-124-589-11	s ELECT 47uF 20% 16V

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C306	1-124-589-11	s ELECT 47uF 20% 16V
C307	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C311	1-124-589-11	s ELECT 47uF 20% 16V
C314	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C315	1-124-589-11	s ELECT 47uF 20% 16V
C320	1-124-589-11	s ELECT 47uF 20% 16V
C322	1-124-589-11	s ELECT 47uF 20% 16V
C323	1-124-589-11	s ELECT 47uF 20% 16V
C324	1-124-589-11	s ELECT 47uF 20% 16V
C325	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C329	1-124-589-11	s ELECT 47uF 20% 16V
C330	1-124-589-11	s ELECT 47uF 20% 16V
C332	1-124-589-11	s ELECT 47uF 20% 16V
C334	1-124-589-11	s ELECT 47uF 20% 16V
C335	1-124-589-11	s ELECT 47uF 20% 16V
C336	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C340	1-124-589-11	s ELECT 47uF 20% 16V
C344	1-124-589-11	s ELECT 47uF 20% 16V
C345	1-124-589-11	s ELECT 47uF 20% 16V
C348	1-124-589-11	s ELECT 47uF 20% 16V
C354	1-131-353-00	s TANTALUM 10uF 10% 35V
C355	1-131-353-00	s TANTALUM 10uF 10% 35V
C356	1-131-353-00	s TANTALUM 10uF 10% 35V
C500	1-107-085-00	s MICA 100PF 5% 50V
C501	1-107-085-00	s MICA 100PF 5% 50V
C509	1-107-077-00	s MICA 47PF 5% 50V
C514	1-131-353-00	s TANTALUM 10uF 10% 35V
C516	1-131-353-00	s TANTALUM 10uF 10% 35V
C526	1-124-589-11	s ELECT 47uF 20% 16V
C529	1-124-589-11	s ELECT 47uF 20% 16V
C531	1-124-589-11	s ELECT 47uF 20% 16V
C534	1-124-589-11	s ELECT 47uF 20% 16V
C536	1-107-085-00	s MICA 100PF 5% 50V
C539	1-107-085-00	s MICA 100PF 5% 50V
C542	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C543	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C546	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C547	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C548	1-124-589-11	s ELECT 47uF 20% 16V
C550	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C553	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C559	1-131-353-00	s TANTALUM 10uF 10% 35V
C560	1-131-353-00	s TANTALUM 10uF 10% 35V
C562	1-107-210-00	s MICA 22PF 5% 500V
C564	1-126-157-11	s ELECT 10uF 20% 16V
C565	1-131-353-00	s TANTALUM 10uF 10% 35V
C567	1-131-353-00	s TANTALUM 10uF 10% 35V
C570	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C571	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C572	1-107-085-00	s MICA 100PF 5% 50V
C574	1-107-085-00	s MICA 100PF 5% 50V
C577	1-107-209-00	s MICA 20PF 5% 500V
C578	1-107-207-00	s MICA 16PF 5% 500V
C579	1-107-207-00	s MICA 16PF 5% 500V
C581	1-131-353-00	s TANTALUM 10uF 10% 35V
C583	1-107-157-00	s MICA 27PF 5% 500V
C584	1-107-157-00	s MICA 27PF 5% 500V
C601	1-124-589-11	s ELECT 47uF 20% 16V
C603	1-124-589-11	s ELECT 47uF 20% 16V

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C605	1-124-443-00	s ELECT 100uF 20% 10V
C607	1-126-157-11	s ELECT 10uF 20% 16V
C608	1-124-443-00	s ELECT 100uF 20% 10V
C610	1-126-157-11	s ELECT 10uF 20% 16V
C611	1-124-443-00	s ELECT 100uF 20% 10V
C613	1-126-157-11	s ELECT 10uF 20% 16V
C615	1-124-589-11	s ELECT 47uF 20% 16V
C617	1-124-589-11	s ELECT 47uF 20% 16V
C619	1-124-589-11	s ELECT 47uF 20% 16V
C623	1-126-157-11	s ELECT 10uF 20% 16V
C627	1-124-589-11	s ELECT 47uF 20% 16V
C629	1-124-589-11	s ELECT 47uF 20% 16V
C637	1-126-157-11	s ELECT 10uF 20% 16V
C640	1-124-589-11	s ELECT 47uF 20% 16V
C642	1-124-589-11	s ELECT 47uF 20% 16V
C644	1-124-589-11	s ELECT 47uF 20% 16V
C702	1-124-589-11	s ELECT 47uF 20% 16V
C705	1-124-589-11	s ELECT 47uF 20% 16V
C707	1-107-210-00	s MICA 22PF 5% 500V
C711	1-107-085-00	s MICA 100PF 5% 50V
C712	1-109-539-00	s MICA 150PF 5% 100V
C713	1-124-589-11	s ELECT 47uF 20% 16V
C715	1-126-160-11	s ELECT 1uF 20% 50V
C718	1-124-589-11	s ELECT 47uF 20% 16V
C719	1-109-539-00	s MICA 150PF 5% 100V
C721	1-124-589-11	s ELECT 47uF 20% 16V
C723	1-124-589-11	s ELECT 47uF 20% 16V
C724	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C725	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C727	1-126-320-11	s ELECT, NONPOLAR 10uF 20% 16V
C728	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C731	1-124-589-11	s ELECT 47uF 20% 16V
C733	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C734	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C739	1-124-589-11	s ELECT 47uF 20% 16V
C740	1-124-589-11	s ELECT 47uF 20% 16V
C743	1-124-589-11	s ELECT 47uF 20% 16V
C746	1-107-209-00	s MICA 20PF 5% 500V
C748	1-107-207-00	s MICA 16PF 5% 500V
C749	1-107-207-00	s MICA 16PF 5% 500V
C751	1-124-589-11	s ELECT 47uF 20% 16V
C752	1-107-208-00	s MICA 18PF 5% 500V
C753	1-107-202-00	s MICA 10PF 5% 500V
C754	1-124-589-11	s ELECT 47uF 20% 16V
C756	1-124-589-11	s ELECT 47uF 20% 16V
C758	1-124-589-11	s ELECT 47uF 20% 16V
C759	1-124-589-11	s ELECT 47uF 20% 16V
C760	1-124-589-11	s ELECT 47uF 20% 16V
C761	1-124-589-11	s ELECT 47uF 20% 16V
C801	1-131-353-00	s TANTALUM 10uF 10% 35V
C804	1-124-589-11	s ELECT 47uF 20% 16V
C805	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C807	1-131-353-00	s TANTALUM 10uF 10% 35V
C810	1-107-166-00	s MICA 62PF 5% 50V
C811	1-107-210-00	s MICA 22PF 5% 500V
C812	1-107-166-00	s MICA 62PF 5% 50V
C814	1-107-085-00	s MICA 100PF 5% 50V
C816	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C817	1-131-353-00	s TANTALUM 10uF 10% 35V

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## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C819	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C820	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C822	1-131-353-00	s TANTALUM 10uF 10% 35V
C825	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C826	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C830	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C831	1-135-145-11	s TANTALUM, CHIP 0.47uF 10% 35V
C834	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C837	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C839	1-109-539-00	s MICA 150PF 5% 100V
C845	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C846	1-107-036-00	s MICA 68PF 5% 500V
C847	1-107-085-00	s MICA 100PF 5% 50V
C848	1-107-209-00	s MICA 20PF 5% 500V
C849	1-107-202-00	s MICA 10PF 5% 500V
C855	1-131-353-00	s TANTALUM 10uF 10% 35V
C862	1-131-353-00	s TANTALUM 10uF 10% 35V
C867	1-135-164-21	s TANTAL 22uF 10% 16V
C870	1-109-542-00	s MICA 220PF 5% 100V
C871	1-109-555-00	s MICA 560PF 5% 50V
C873	1-107-085-00	s MICA 100PF 5% 50V
C874	1-107-085-00	s MICA 100PF 5% 50V
C876	1-135-159-21	s TANTALUM, CHIP 10uF 10% 20V
C880	1-107-210-00	s MICA 22PF 5% 500V
C881	1-107-202-00	s MICA 10PF 5% 500V
C882	1-107-210-00	s MICA 22PF 5% 500V
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
D1	8-719-800-76	s DIODE 1S5226
D2	8-719-109-75	s DIODE RD4.3ES-B2
D3	8-719-109-81	s DIODE RD4.7ES-B2
D4	8-719-100-05	s DIODE 1S2837
D5	8-719-100-05	s DIODE 1S2837
D6	8-719-100-05	s DIODE 1S2837
D7	8-719-100-05	s DIODE 1S2837
D8	8-719-100-05	s DIODE 1S2837
D9	8-719-100-05	s DIODE 1S2837
D10	8-719-100-05	s DIODE 1S2837
D500	8-719-800-76	s DIODE 1S5226
D501	8-719-800-76	s DIODE 1S5226
D502	8-719-800-76	s DIODE 1S5226
D503	8-719-800-76	s DIODE 1S5226
D504	8-719-800-76	s DIODE 1S5226
D505	8-719-109-93	s DIODE RD6.2ES-B2
D506	8-719-109-93	s DIODE RD6.2ES-B2
D700	8-719-800-76	s DIODE 1S5226
D801	8-719-100-03	s DIODE 1S2835
D802	8-719-100-03	s DIODE 1S2835
D803	8-719-100-03	s DIODE 1S2835
D804	8-719-100-03	s DIODE 1S2835
D805	8-719-800-76	s DIODE 1S5226
DL1	1-415-583-11	s DELAY LINE
DL2	1-415-583-11	s DELAY LINE
DL3	1-415-583-11	s DELAY LINE
DL4	1-415-583-11	s DELAY LINE
DL5	1-415-583-11	s DELAY LINE
DL6	1-415-583-11	s DELAY LINE

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
DL601	1-415-339-00	s DELAY LINE 300nS
DL602	1-415-168-00	s DELAY LINE 200ns
DL603	1-415-339-00	s DELAY LINE 300nS
DL604	1-415-339-00	s DELAY LINE 300nS
FL500	1-235-584-11	s FILTER, LOW PASS
FL501	1-235-786-11	s FILTER, LOW PASS 3MHz
FL502	1-235-584-11	s FILTER, LOW PASS
FL503	1-235-584-11	s FILTER, LOW PASS
FL504	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL700	1-235-584-11	s FILTER, LOW PASS
FL701	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL801	1-235-181-00	s FILTER, BANDPASS 4.43MHz
FL802	1-235-181-00	s FILTER, BANDPASS 4.43MHz
IC1	8-759-702-07	s IC NJM13700M
IC2	8-741-100-42	s IC SBX1594-01
IC3	8-759-908-17	s IC TL082CPS
IC4	8-759-908-17	s IC TL082CPS
IC5	8-759-984-88	s IC LM6361M
IC6	8-759-984-88	s IC LM6361M
IC7	8-759-009-07	s IC MC14053BF
IC8	8-759-984-88	s IC LM6361M
IC9	8-759-908-17	s IC TL082CPS
IC10	8-759-908-17	s IC TL082CPS
IC11	8-759-009-07	s IC MC14053BF
IC12	8-759-948-01	s IC 74F04SJ
IC13	8-759-200-79	s IC TC4049BF
IC14	8-759-141-65	s IC UPD6951C
IC15	8-759-926-28	s IC SN74HC174NS
IC16	8-752-322-72	s IC CXK1202S
IC17	8-752-322-72	s IC CXK1202S
IC18	8-752-322-72	s IC CXK1202S
IC19	8-752-322-72	s IC CXK1202S
IC20	8-752-322-72	s IC CXK1202S
IC21	8-759-009-12	s IC MC14071BF
IC22	8-759-982-21	s IC RC78L05A
IC23	8-759-009-05	s IC MC14051BF
IC24	8-759-009-05	s IC MC14051BF
IC25	8-759-009-05	s IC MC14051BF
IC26	8-759-009-05	s IC MC14051BF
IC27	8-759-009-05	s IC MC14051BF
IC28	8-759-009-05	s IC MC14051BF
IC29	8-759-009-05	s IC MC14051BF
IC30	8-759-009-05	s IC MC14051BF
IC31	8-759-009-05	s IC MC14051BF
IC32	8-759-009-05	s IC MC14051BF
IC33	8-759-984-88	s IC LM6361M
IC34	8-759-984-88	s IC LM6361M
IC35	8-759-009-07	s IC MC14053BF
IC36	8-759-982-21	s IC RC78L05A
IC37	8-759-982-20	s IC RC78L02A
IC38	8-759-984-88	s IC LM6361M
IC39	8-759-702-07	s IC NJM13700M
IC40	8-759-906-54	s IC TL064CNS
IC301	8-759-702-07	s IC NJM13700M
IC302	8-759-602-06	s IC M5109P
IC303	8-759-602-06	s IC M5109P
IC304	8-759-908-17	s IC TL082CPS
IC305	8-759-009-07	s IC MC14053BF

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC306	8-759-702-07	s IC NJM13700M
IC307	8-759-602-06	s IC M5109P
IC308	8-759-702-07	s IC NJM13700M
IC309	8-759-602-06	s IC M5109P
IC310	8-759-982-44	s IC RC79L05A
IC311	8-759-908-17	s IC TL082CPS
IC500	8-759-209-20	s IC TC4584BF
IC501	8-759-009-07	s IC MC14053BF
IC502	8-759-908-17	s IC TL082CPS
IC503	8-759-908-17	s IC TL082CPS
IC504	8-759-908-17	s IC TL082CPS
IC505	8-759-602-06	s IC M5109P
IC506	8-759-602-06	s IC M5109P
IC507	8-759-906-59	s IC CX22017
IC601	8-759-014-96	s IC MC1496P
IC602	8-759-014-96	s IC MC1496P
IC603	8-759-908-17	s IC TL082CPS
IC604	8-759-908-17	s IC TL082CPS
IC605	8-759-908-17	s IC TL082CPS
IC609	8-759-984-88	s IC LM6361M
IC700	8-759-114-06	s IC UPC814G2-1
IC701	8-759-209-20	s IC TC4584BF
IC702	8-749-900-77	s IC BX-1333L
IC703	8-759-906-59	s IC CX22017
IC704	8-759-982-21	s IC RC78L05A
IC705	8-759-982-44	s IC RC79L05A
IC801	8-741-104-00	s IC BX1040
IC802	8-759-101-12	s IC UPC311G2
IC803	8-759-908-39	s IC CX7998
IC804	8-741-129-10	s IC BX-1291
IC805	8-757-930-11	s IC CX7930A
IC806	8-759-206-28	s IC TC74HC123F
IC807	8-759-201-60	s IC TC40H002F
IC808	8-759-948-28	s IC SM5828P
IC809	8-759-948-28	s IC SM5828P
IC810	8-759-200-79	s IC TC4049BF
IC811	8-741-133-91	s IC BX-1339A
IC812	8-741-133-91	s IC BX-1339A
IC813	8-759-011-65	s IC MC74HC4053F
IC814	8-759-045-57	s IC MC14557BCP
IC815	8-759-008-45	s IC MC74HC4538F
IC816	8-759-201-53	s IC TC40H000F
IC817	8-759-008-79	s IC MC14011BF
IC818	8-759-200-79	s IC TC4049BF
IC819	8-759-205-37	s IC SN74HC574NS
IC820	8-759-205-37	s IC SN74HC574NS
IC821	8-759-008-45	s IC MC74HC4538F
IC822	8-759-982-31	s IC RC78M05FA
JR1	1-216-295-00	s METAL, CHIP 0-OHM
JR2	1-216-295-00	s METAL, CHIP 0-OHM
JR3	1-216-295-00	s METAL, CHIP 0-OHM
JR4	1-216-295-00	s METAL, CHIP 0-OHM
JR5	1-216-295-00	s METAL, CHIP 0-OHM
JR7	1-216-295-00	s METAL, CHIP 0-OHM
JR8	1-216-295-00	s METAL, CHIP 0-OHM
JR9	1-216-295-00	s METAL, CHIP 0-OHM
JR700	1-216-295-00	s METAL, CHIP 0-OHM
JR801	1-216-295-00	s METAL, CHIP 0-OHM

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
JR802	1-216-295-00	s METAL, CHIP 0-OHM
JR803	1-216-295-00	s METAL, CHIP 0-OHM
JR804	1-216-295-00	s METAL, CHIP 0-OHM
JR805	1-216-295-00	s METAL, CHIP 0-OHM
JR806	1-216-295-00	s METAL, CHIP 0-OHM
JR807	1-216-295-00	s METAL, CHIP 0-OHM
JR808	1-216-295-00	s METAL, CHIP 0-OHM
JR809	1-216-295-00	s METAL, CHIP 0-OHM
JR811	1-216-295-00	s METAL, CHIP 0-OHM
JR812	1-216-295-00	s METAL, CHIP 0-OHM
JR813	1-216-295-00	s METAL, CHIP 0-OHM
JR814	1-216-295-00	s METAL, CHIP 0-OHM
JR815	1-216-295-00	s METAL, CHIP 0-OHM
L500	1-410-711-31	s INDUCTOR CHIP 33UH
L502	1-410-714-31	s INDUCTOR CHIP 56UH
L701	1-410-711-31	s INDUCTOR CHIP 33UH
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-112-65	s TRANSISTOR 2SA1462
Q3	8-729-216-22	s TRANSISTOR 2SA1162
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-112-65	s TRANSISTOR 2SA1462
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-116-64	s TRANSISTOR 2SK508-K51
Q8	8-729-216-22	s TRANSISTOR 2SA1162
Q9	8-729-100-66	s TRANSISTOR 2SC1623
Q10	8-729-100-66	s TRANSISTOR 2SC1623
Q11	8-729-216-22	s TRANSISTOR 2SA1162
Q12	8-729-216-22	s TRANSISTOR 2SA1162
Q13	8-729-100-66	s TRANSISTOR 2SC1623
Q14	8-729-112-65	s TRANSISTOR 2SA1462
Q15	8-729-112-65	s TRANSISTOR 2SA1462
Q16	8-729-112-65	s TRANSISTOR 2SA1462
Q17	8-729-112-65	s TRANSISTOR 2SA1462
Q18	8-729-175-73	s TRANSISTOR 2SC2757
Q19	8-729-175-73	s TRANSISTOR 2SC2757
Q20	8-729-175-73	s TRANSISTOR 2SC2757
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-116-64	s TRANSISTOR 2SK508-K51
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-100-66	s TRANSISTOR 2SC1623
Q26	8-729-100-66	s TRANSISTOR 2SC1623
Q27	8-729-100-66	s TRANSISTOR 2SC1623
Q28	8-729-100-66	s TRANSISTOR 2SC1623
Q29	8-729-216-22	s TRANSISTOR 2SA1162
Q30	8-729-216-22	s TRANSISTOR 2SA1162
Q31	8-729-100-66	s TRANSISTOR 2SC1623
Q32	8-729-100-66	s TRANSISTOR 2SC1623
Q33	8-729-100-66	s TRANSISTOR 2SC1623
Q34	8-729-100-66	s TRANSISTOR 2SC1623
Q35	8-729-216-22	s TRANSISTOR 2SA1162
Q36	8-729-100-66	s TRANSISTOR 2SC1623
Q37	8-729-216-22	s TRANSISTOR 2SA1162
Q38	8-729-100-66	s TRANSISTOR 2SC1623
Q39	8-729-216-22	s TRANSISTOR 2SA1162
Q40	8-729-100-66	s TRANSISTOR 2SC1623
Q41	8-729-216-22	s TRANSISTOR 2SA1162
Q42	8-729-100-66	s TRANSISTOR 2SC1623

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q43	8-729-216-22	s TRANSISTOR 2SA1162
Q44	8-729-100-66	s TRANSISTOR 2SC1623
Q45	8-729-216-22	s TRANSISTOR 2SA1162
Q46	8-729-100-66	s TRANSISTOR 2SC1623
Q47	8-729-216-22	s TRANSISTOR 2SA1162
Q48	8-729-100-66	s TRANSISTOR 2SC1623
Q49	8-729-100-66	s TRANSISTOR 2SC1623
Q50	8-729-100-66	s TRANSISTOR 2SC1623
Q51	8-729-100-66	s TRANSISTOR 2SC1623
Q52	8-729-100-66	s TRANSISTOR 2SC1623
Q53	8-729-100-66	s TRANSISTOR 2SC1623
Q54	8-729-100-66	s TRANSISTOR 2SC1623
Q55	8-729-216-22	s TRANSISTOR 2SA1162
Q56	8-729-100-66	s TRANSISTOR 2SC1623
Q57	8-729-100-66	s TRANSISTOR 2SC1623
Q58	8-729-100-66	s TRANSISTOR 2SC1623
Q59	8-729-216-22	s TRANSISTOR 2SA1162
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-100-66	s TRANSISTOR 2SC1623
Q62	8-729-100-66	s TRANSISTOR 2SC1623
Q63	8-729-216-22	s TRANSISTOR 2SA1162
Q64	8-729-100-66	s TRANSISTOR 2SC1623
Q65	8-729-216-22	s TRANSISTOR 2SA1162
Q66	8-729-100-66	s TRANSISTOR 2SC1623
Q67	8-729-100-66	s TRANSISTOR 2SC1623
Q68	8-729-100-66	s TRANSISTOR 2SC1623
Q69	8-729-216-22	s TRANSISTOR 2SA1162
Q70	8-729-100-66	s TRANSISTOR 2SC1623
Q71	8-729-100-66	s TRANSISTOR 2SC1623
Q72	8-729-100-66	s TRANSISTOR 2SC1623
Q73	8-729-216-22	s TRANSISTOR 2SA1162
Q74	8-729-100-66	s TRANSISTOR 2SC1623
Q75	8-729-100-66	s TRANSISTOR 2SC1623
Q76	8-729-100-66	s TRANSISTOR 2SC1623
Q77	8-729-100-66	s TRANSISTOR 2SC1623
Q78	8-729-100-66	s TRANSISTOR 2SC1623
Q79	8-729-216-22	s TRANSISTOR 2SA1162
Q80	8-729-216-22	s TRANSISTOR 2SA1162
Q81	8-729-216-22	s TRANSISTOR 2SA1162
Q82	8-729-100-66	s TRANSISTOR 2SC1623
Q83	8-729-100-66	s TRANSISTOR 2SC1623
Q84	8-729-100-66	s TRANSISTOR 2SC1623
Q85	8-729-216-22	s TRANSISTOR 2SA1162
Q86	8-729-216-22	s TRANSISTOR 2SA1162
Q87	8-729-100-66	s TRANSISTOR 2SC1623
Q88	8-729-100-66	s TRANSISTOR 2SC1623
Q89	8-729-216-22	s TRANSISTOR 2SA1162
Q90	8-729-216-22	s TRANSISTOR 2SA1162
Q91	8-729-116-64	s TRANSISTOR 2SK508-K51
Q92	8-729-216-22	s TRANSISTOR 2SA1162
Q93	8-729-100-66	s TRANSISTOR 2SC1623
Q94	8-729-100-66	s TRANSISTOR 2SC1623
Q95	8-729-216-22	s TRANSISTOR 2SA1162
Q96	8-729-216-22	s TRANSISTOR 2SA1162
Q97	8-729-100-66	s TRANSISTOR 2SC1623
Q98	8-729-116-64	s TRANSISTOR 2SK508-K51
Q99	8-729-216-22	s TRANSISTOR 2SA1162
Q100	8-729-112-65	s TRANSISTOR 2SA1462
Q101	8-729-112-65	s TRANSISTOR 2SA1462

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q102	8-729-175-73	s TRANSISTOR 2SC2757
Q103	8-729-175-73	s TRANSISTOR 2SC2757
Q105	8-729-100-66	s TRANSISTOR 2SC1623
Q301	8-729-100-66	s TRANSISTOR 2SC1623
Q302	8-729-112-65	s TRANSISTOR 2SA1462
Q303	8-729-216-22	s TRANSISTOR 2SA1162
Q304	8-729-100-66	s TRANSISTOR 2SC1623
Q305	8-729-112-65	s TRANSISTOR 2SA1462
Q306	8-729-216-22	s TRANSISTOR 2SA1162
Q307	8-729-116-64	s TRANSISTOR 2SK508-K51
Q308	8-729-216-22	s TRANSISTOR 2SA1162
Q309	8-729-100-66	s TRANSISTOR 2SC1623
Q310	8-729-216-22	s TRANSISTOR 2SA1162
Q311	8-729-116-64	s TRANSISTOR 2SK508-K51
Q312	8-729-100-66	s TRANSISTOR 2SC1623
Q313	8-729-100-66	s TRANSISTOR 2SC1623
Q314	8-729-112-65	s TRANSISTOR 2SA1462
Q315	8-729-216-22	s TRANSISTOR 2SA1162
Q316	8-729-100-66	s TRANSISTOR 2SC1623
Q317	8-729-112-65	s TRANSISTOR 2SA1462
Q318	8-729-216-22	s TRANSISTOR 2SA1162
Q319	8-729-116-64	s TRANSISTOR 2SK508-K51
Q320	8-729-216-22	s TRANSISTOR 2SA1162
Q321	8-729-100-66	s TRANSISTOR 2SC1623
Q322	8-729-100-66	s TRANSISTOR 2SC1623
Q323	8-729-112-65	s TRANSISTOR 2SA1462
Q324	8-729-216-22	s TRANSISTOR 2SA1162
Q325	8-729-100-66	s TRANSISTOR 2SC1623
Q326	8-729-112-65	s TRANSISTOR 2SA1462
Q327	8-729-216-22	s TRANSISTOR 2SA1162
Q328	8-729-116-64	s TRANSISTOR 2SK508-K51
Q329	8-729-216-22	s TRANSISTOR 2SA1162
Q330	8-729-100-66	s TRANSISTOR 2SC1623
Q331	8-729-216-22	s TRANSISTOR 2SA1162
Q500	8-729-100-66	s TRANSISTOR 2SC1623
Q501	8-729-100-66	s TRANSISTOR 2SC1623
Q502	8-729-216-22	s TRANSISTOR 2SA1162
Q503	8-729-216-22	s TRANSISTOR 2SA1162
Q504	8-729-100-66	s TRANSISTOR 2SC1623
Q506	8-729-216-22	s TRANSISTOR 2SA1162
Q507	8-729-216-22	s TRANSISTOR 2SA1162
Q508	8-729-216-22	s TRANSISTOR 2SA1162
Q509	8-729-216-22	s TRANSISTOR 2SA1162
Q510	8-729-100-66	s TRANSISTOR 2SC1623
Q512	8-729-100-66	s TRANSISTOR 2SC1623
Q513	8-729-100-66	s TRANSISTOR 2SC1623
Q514	8-729-175-73	s TRANSISTOR 2SC2757
Q515	8-729-175-73	s TRANSISTOR 2SC2757
Q516	8-729-175-73	s TRANSISTOR 2SC2757
Q517	8-729-100-66	s TRANSISTOR 2SC1623
Q518	8-729-175-73	s TRANSISTOR 2SC2757
Q519	8-729-175-73	s TRANSISTOR 2SC2757
Q520	8-729-175-73	s TRANSISTOR 2SC2757
Q521	8-729-100-66	s TRANSISTOR 2SC1623
Q522	8-729-100-66	s TRANSISTOR 2SC1623
Q523	8-729-175-73	s TRANSISTOR 2SC2757
Q524	8-729-100-66	s TRANSISTOR 2SC1623
Q525	8-729-175-73	s TRANSISTOR 2SC2757
Q526	8-729-100-66	s TRANSISTOR 2SC1623

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q527	8-729-216-22 s	TRANSISTOR 2SA1162
Q528	8-729-100-66 s	TRANSISTOR 2SC1623
Q529	8-729-216-22 s	TRANSISTOR 2SA1162
Q530	8-729-216-22 s	TRANSISTOR 2SA1162
Q531	8-729-216-22 s	TRANSISTOR 2SA1162
Q532	8-729-100-66 s	TRANSISTOR 2SC1623
Q533	8-729-100-66 s	TRANSISTOR 2SC1623
Q534	8-729-100-66 s	TRANSISTOR 2SC1623
Q535	8-729-100-66 s	TRANSISTOR 2SC1623
Q536	8-729-100-66 s	TRANSISTOR 2SC1623
Q537	8-729-100-66 s	TRANSISTOR 2SC1623
Q538	8-729-175-73 s	TRANSISTOR 2SC2757
Q539	8-729-175-73 s	TRANSISTOR 2SC2757
Q540	8-729-175-73 s	TRANSISTOR 2SC2757
Q541	8-729-216-22 s	TRANSISTOR 2SA1162
Q542	8-729-216-22 s	TRANSISTOR 2SA1162
Q543	8-729-100-66 s	TRANSISTOR 2SC1623
Q544	8-729-216-22 s	TRANSISTOR 2SA1162
Q545	8-729-100-66 s	TRANSISTOR 2SC1623
Q546	8-729-100-66 s	TRANSISTOR 2SC1623
Q601	8-729-100-66 s	TRANSISTOR 2SC1623
Q602	8-729-100-66 s	TRANSISTOR 2SC1623
Q603	8-729-100-66 s	TRANSISTOR 2SC1623
Q604	8-729-100-66 s	TRANSISTOR 2SC1623
Q605	8-729-100-66 s	TRANSISTOR 2SC1623
Q606	8-729-100-66 s	TRANSISTOR 2SC1623
Q607	8-729-100-66 s	TRANSISTOR 2SC1623
Q608	8-729-100-66 s	TRANSISTOR 2SC1623
Q609	8-729-100-66 s	TRANSISTOR 2SC1623
Q610	8-729-100-66 s	TRANSISTOR 2SC1623
Q611	8-729-216-22 s	TRANSISTOR 2SA1162
Q612	8-729-100-66 s	TRANSISTOR 2SC1623
Q613	8-729-216-22 s	TRANSISTOR 2SA1162
Q617	8-729-216-22 s	TRANSISTOR 2SA1162
Q618	8-729-216-22 s	TRANSISTOR 2SA1162
Q619	8-729-216-22 s	TRANSISTOR 2SA1162
Q620	8-729-216-22 s	TRANSISTOR 2SA1162
Q621	8-729-216-22 s	TRANSISTOR 2SA1162
Q622	8-729-216-22 s	TRANSISTOR 2SA1162
Q630	8-729-100-66 s	TRANSISTOR 2SC1623
Q631	8-729-100-66 s	TRANSISTOR 2SC1623
Q632	8-729-100-66 s	TRANSISTOR 2SC1623
Q633	8-729-216-22 s	TRANSISTOR 2SA1162
Q700	8-729-100-66 s	TRANSISTOR 2SC1623
Q701	8-729-216-22 s	TRANSISTOR 2SA1162
Q702	8-729-100-66 s	TRANSISTOR 2SC1623
Q703	8-729-100-66 s	TRANSISTOR 2SC1623
Q704	8-729-216-22 s	TRANSISTOR 2SA1162
Q705	8-729-100-66 s	TRANSISTOR 2SC1623
Q706	8-729-175-73 s	TRANSISTOR 2SC2757
Q707	8-729-100-66 s	TRANSISTOR 2SC1623
Q708	8-729-175-73 s	TRANSISTOR 2SC2757
Q709	8-729-100-66 s	TRANSISTOR 2SC1623
Q710	8-729-216-22 s	TRANSISTOR 2SA1162
Q711	8-729-216-22 s	TRANSISTOR 2SA1162
Q712	8-729-175-73 s	TRANSISTOR 2SC2757
Q713	8-729-100-66 s	TRANSISTOR 2SC1623
Q714	8-729-216-22 s	TRANSISTOR 2SA1162
Q715	8-729-100-66 s	TRANSISTOR 2SC1623

## (SD-20 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q716	8-729-216-22 s	TRANSISTOR 2SA1162
Q717	8-729-216-22 s	TRANSISTOR 2SA1162
Q718	8-729-100-66 s	TRANSISTOR 2SC1623
Q719	8-729-216-22 s	TRANSISTOR 2SA1162
Q720	8-729-100-66 s	TRANSISTOR 2SC1623
Q721	8-729-175-73 s	TRANSISTOR 2SC2757
Q722	8-729-175-73 s	TRANSISTOR 2SC2757
Q723	8-729-175-73 s	TRANSISTOR 2SC2757
Q724	8-729-175-73 s	TRANSISTOR 2SC2757
Q725	8-729-175-73 s	TRANSISTOR 2SC2757
Q726	8-729-100-66 s	TRANSISTOR 2SC1623
Q727	8-729-216-22 s	TRANSISTOR 2SA1162
Q728	8-729-100-66 s	TRANSISTOR 2SC1623
Q729	8-729-216-22 s	TRANSISTOR 2SA1162
Q730	8-729-100-66 s	TRANSISTOR 2SC1623
Q801	8-729-100-66 s	TRANSISTOR 2SC1623
Q802	8-729-109-43 s	TRANSISTOR 2SK94-X3
Q803	8-729-100-66 s	TRANSISTOR 2SC1623
Q804	8-729-100-66 s	TRANSISTOR 2SC1623
Q805	8-729-100-66 s	TRANSISTOR 2SC1623
Q806	8-729-100-66 s	TRANSISTOR 2SC1623
Q807	8-729-100-66 s	TRANSISTOR 2SC1623
Q808	8-729-100-66 s	TRANSISTOR 2SC1623
Q809	8-729-100-66 s	TRANSISTOR 2SC1623
Q810	8-729-216-22 s	TRANSISTOR 2SA1162
Q811	8-729-109-43 s	TRANSISTOR 2SK94-X3
Q812	8-729-216-22 s	TRANSISTOR 2SA1162
Q813	8-729-100-66 s	TRANSISTOR 2SC1623
Q815	8-729-175-73 s	TRANSISTOR 2SC2757
Q816	8-729-112-65 s	TRANSISTOR 2SA1462
Q817	8-729-175-73 s	TRANSISTOR 2SC2757
Q818	8-729-112-65 s	TRANSISTOR 2SA1462
R29	1-216-615-11 s	METAL, CHIP 33 0.5% 1/10W
R549	1-216-615-11 s	METAL, CHIP 33 0.5% 1/10W
R562	1-216-615-11 s	METAL, CHIP 33 0.5% 1/10W
R622	1-214-503-00 s	METAL 3.32K 0.50% 1/4W
R623	1-214-499-00 s	METAL 1.62K 0.50% 1/4W
R624	1-214-504-00 s	METAL 9.09K 0.50% 1/4W
R763	1-216-309-00 s	METAL 5.6 5% 1/10W
R764	1-216-309-00 s	METAL 5.6 5% 1/10W
R802	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R808	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
R809	1-216-121-00 s	METAL, CHIP 1M 5% 1/10W
RB1	1-235-948-11 s	NETWORK, RESISTOR
RB2	1-235-948-11 s	NETWORK, RESISTOR
RB3	1-235-948-11 s	NETWORK, RESISTOR
RB4	1-235-948-11 s	NETWORK, RESISTOR
RB5	1-235-948-11 s	NETWORK, RESISTOR
RB6	1-235-948-11 s	NETWORK, RESISTOR
RV1	1-237-039-11 s	RES, ADJ, METAL 100K
RV2	1-237-033-11 s	RES, ADJ, METAL 1K
RV3	1-237-032-11 s	RES, ADJ, METAL 500
RV4	1-237-039-11 s	RES, ADJ, METAL 100K
RV5	1-237-037-11 s	RES, ADJ, METAL 20K
RV6	1-237-037-11 s	RES, ADJ, METAL 20K
RV7	1-237-032-11 s	RES, ADJ, METAL 500
RV8	1-237-032-11 s	RES, ADJ, METAL 500

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



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Ref. No. or Q'ty	Part No.	SP Description
RV9	1-237-037-11	s RES, ADJ, METAL 20K
RV10	1-237-036-11	s RES, ADJ, METAL 10K
RV11	1-237-038-11	s RES, ADJ, METAL 50K
RV12	1-237-039-11	s RES, ADJ, METAL 100K
RV13	1-237-036-11	s RES, ADJ, METAL 10K
RV14	1-237-034-11	s RES, ADJ, METAL 2K
RV15	1-237-037-11	s RES, ADJ, METAL 20K
RV16	1-237-035-11	s RES, ADJ, METAL 5K
RV17	1-237-034-11	s RES, ADJ, METAL 2K
RV18	1-237-039-11	s RES, ADJ, METAL 100K
RV19	1-237-034-11	s RES, ADJ, METAL 2K
RV20	1-237-032-11	s RES, ADJ, METAL 500
RV21	1-237-035-11	s RES, ADJ, METAL 5K
RV22	1-237-037-11	s RES, ADJ, METAL 20K
RV23	1-237-032-11	s RES, ADJ, METAL 500
RV24	1-237-033-11	s RES, ADJ, METAL 1K
RV25	1-237-037-11	s RES, ADJ, METAL 20K
RV301	1-237-033-11	s RES, ADJ, METAL 1K
RV302	1-237-032-11	s RES, ADJ, METAL 500
RV303	1-237-032-11	s RES, ADJ, METAL 500
RV304	1-237-032-11	s RES, ADJ, METAL 500
RV305	1-237-033-11	s RES, ADJ, METAL 1K
RV306	1-237-033-11	s RES, ADJ, METAL 1K
RV307	1-237-500-21	s RES, ADJ, METAL 1K
RV308	1-237-032-11	s RES, ADJ, METAL 500
RV309	1-237-033-11	s RES, ADJ, METAL 1K
RV310	1-237-032-11	s RES, ADJ, METAL 500
RV311	1-237-033-11	s RES, ADJ, METAL 1K
RV312	1-237-032-11	s RES, ADJ, METAL 500
RV313	1-237-032-11	s RES, ADJ, METAL 500
RV314	1-237-032-11	s RES, ADJ, METAL 500
RV500	1-237-034-11	s RES, ADJ, METAL 2K
RV501	1-237-036-11	s RES, ADJ, METAL 10K
RV502	1-237-037-11	s RES, ADJ, METAL 20K
RV503	1-237-036-11	s RES, ADJ, METAL 10K
RV504	1-237-036-11	s RES, ADJ, METAL 10K
RV505	1-237-036-11	s RES, ADJ, METAL 10K
RV506	1-237-037-11	s RES, ADJ, METAL 20K
RV507	1-237-033-11	s RES, ADJ, METAL 1K
RV508	1-237-035-11	s RES, ADJ, METAL 5K
RV509	1-237-033-11	s RES, ADJ, METAL 1K
RV510	1-237-035-11	s RES, ADJ, METAL 5K
RV511	1-237-033-11	s RES, ADJ, METAL 1K
RV512	1-237-033-11	s RES, ADJ, METAL 1K
RV513	1-237-035-11	s RES, ADJ, METAL 5K
RV514	1-237-035-11	s RES, ADJ, METAL 5K
RV515	1-237-032-11	s RES, ADJ, METAL 500
RV516	1-237-032-11	s RES, ADJ, METAL 500
RV517	1-237-032-11	s RES, ADJ, METAL 500
RV601	1-237-035-11	s RES, ADJ, METAL 5K
RV602	1-237-035-11	s RES, ADJ, METAL 5K
RV603	1-237-035-11	s RES, ADJ, METAL 5K
RV604	1-237-035-11	s RES, ADJ, METAL 5K
RV609	1-237-034-11	s RES, ADJ, METAL 2K
RV700	1-237-034-11	s RES, ADJ, METAL 2K
RV701	1-237-035-11	s RES, ADJ, METAL 5K
RV702	1-237-037-11	s RES, ADJ, METAL 20K
RV703	1-237-037-11	s RES, ADJ, METAL 20K
RV704	1-237-034-11	s RES, ADJ, METAL 2K

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Ref. No. or Q'ty	Part No.	SP Description
RV705	1-237-032-11	s RES, ADJ, METAL 500
RV706	1-237-035-11	s RES, ADJ, METAL 5K
RV707	1-237-035-11	s RES, ADJ, METAL 5K
RV708	1-237-032-11	s RES, ADJ, METAL 500
RV709	1-237-514-21	s RES, ADJ, METAL 500
RV801	1-237-035-11	s RES, ADJ, METAL 5K
RV802	1-237-503-21	s RES, ADJ, METAL 10K
RV803	1-237-503-21	s RES, ADJ, METAL 10K
RV804	1-237-036-11	s RES, ADJ, METAL 10K
RV805	1-237-037-11	s RES, ADJ, METAL 20K
RV806	1-237-035-11	s RES, ADJ, METAL 5K
RV807	1-237-037-11	s RES, ADJ, METAL 20K
RV808	1-237-037-11	s RES, ADJ, METAL 20K
RV809	1-237-501-21	s RES, ADJ, METAL 2K
RV810	1-230-997-11	s RES, VAR, CARBON 20K/20K
RV811	1-237-037-11	s RES, ADJ, METAL 20K
RV812	1-237-036-11	s RES, ADJ, METAL 10K
S500	1-570-602-11	s SWITCH, DIP 2-CKT
S601	1-516-925-21	s SWITCH, DIP 8-CKT
S602	1-516-925-21	s SWITCH, DIP 8-CKT
S603	1-516-924-21	s SWITCH, DIP
S604	1-554-399-00	s SWITCH, TOGGLE
S801	1-554-399-00	s SWITCH, TOGGLE
S802	1-570-373-12	s SWITCH, SLIDE
S803	1-570-086-11	s SWITCH, SLIDE
S804	1-553-252-00	s SWITCH, DIGITAL
S805	1-554-027-00	s SWITCH, DIGITAL
S810	1-554-399-00	s SWITCH, TOGGLE
TH800	1-800-071-XX	s TH DIRECT-HEATING DISK S-300
TH801	1-800-071-XX	s TH DIRECT-HEATING DISK S-300
VC0801	1-567-112-00	s OSCILLATOR, CRYSTAL
VC0802	1-567-086-00	s OSCILLATOR, CRYSTAL

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## SY-138 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-371-A	o MOUNTED CIRCUIT BOARD, SY-138 (P)
1pc	2-139-140-01	o PLATE, SHIELD
2pcs	2-182-909-01	o LEVER, PC BOARD
2pcs	7-626-320-11	o PIN, SPRING 3X8
1pc	7-682-947-01	s SCREW +PSW 3X6
6pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C2	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C3	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C4	1-125-447-11	s DOUBLE LAYERS 1FARAD 5.5V
C5	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C6	1-126-157-11	s ELECT 10uF 20% 16V
C7	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C10	1-126-157-11	s ELECT 10uF 20% 16V
C11	1-126-157-11	s ELECT 10uF 20% 16V
C16	1-126-157-11	s ELECT 10uF 20% 16V
C17	1-126-157-11	s ELECT 10uF 20% 16V
C20	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C21	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C22	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C23	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C24	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C25	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C26	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C27	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C28	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C29	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C30	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C31	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C32	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C33	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C34	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C35	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C36	1-124-478-11	s ELECT 100uF 20% 25V
C37	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C38	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C39	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C40	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C41	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C42	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C43	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C50	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C52	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C53	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C54	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C55	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C56	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C57	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C58	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C59	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C61	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C62	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C63	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C65	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C67	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C69	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C70	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C71	1-162-638-11	s CERAMIC, CHIP 1uF 16V

## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C73	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C74	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C76	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C78	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C80	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C82	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C86	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C89	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C93	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C95	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C97	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C99	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C101	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C103	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C105	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C107	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C109	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C111	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C113	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C114	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C115	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C116	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C117	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C118	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C119	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C120	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C121	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C122	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C123	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C124	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C125	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C126	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C127	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C128	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C129	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C130	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C131	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C132	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C133	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C134	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C135	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C136	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C137	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C138	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C139	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C140	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C141	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C142	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C143	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C144	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C145	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C146	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C156	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C157	1-124-234-00	s ELECT 22uF 20% 16V
C158	1-126-157-11	s ELECT 10uF 20% 16V
C159	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C160	1-124-234-00	s ELECT 22uF 20% 16V
C161	1-126-157-11	s ELECT 10uF 20% 16V
C162	1-164-232-11	s CERAMIC 0.01uF 10% 50V

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C163	1-124-234-00	s ELECT 22uF 20% 16V
C164	1-126-157-11	s ELECT 10uF 20% 16V
C165	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C167	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C168	1-124-234-00	s ELECT 22uF 20% 16V
C169	1-126-157-11	s ELECT 10uF 20% 16V
C170	1-164-232-11	s CERAMIC 0.01uF 10% 50V
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN4	1-506-694-11	o HEADER 26P
D1	8-719-100-05	s DIODE 1S2837
D5	8-719-100-05	s DIODE 1S2837
D6	8-719-100-05	s DIODE 1S2837
D7	8-719-105-32	s DIODE RD2.7M-B2
D8	8-719-100-05	s DIODE 1S2837
D9	8-719-105-32	s DIODE RD2.7M-B2
D10	8-719-100-05	s DIODE 1S2837
D11	8-719-105-32	s DIODE RD2.7M-B2
D12	8-719-100-05	s DIODE 1S2837
D13	8-719-105-32	s DIODE RD2.7M-B2
D14	8-719-100-05	s DIODE 1S2837
D15	8-719-105-73	s DIODE RD4.7M-B2
D16	8-719-100-05	s DIODE 1S2837
D17	8-719-100-05	s DIODE 1S2837
D18	8-719-100-05	s DIODE 1S2837
D19	8-719-100-05	s DIODE 1S2837
D20	8-719-100-05	s DIODE 1S2837
D21	8-719-100-05	s DIODE 1S2837
D22	8-719-100-05	s DIODE 1S2837
D23	8-719-100-05	s DIODE 1S2837
D24	8-719-100-05	s DIODE 1S2837
D25	8-719-100-05	s DIODE 1S2837
D26	8-719-100-05	s DIODE 1S2837
D27	8-719-100-05	s DIODE 1S2837
D28	8-719-100-05	s DIODE 1S2837
IC1	8-759-926-67	s IC SN74HC374NS
IC3	8-759-926-11	s IC SN74HC138NS
IC4	8-759-926-48	s IC SN74HC244NS
IC5	8-759-926-48	s IC SN74HC244NS
IC6	8-759-303-46	s IC HM6264LFP-15SL
IC7	8-759-204-94	s IC TC74HC00F
IC8	8-759-990-64	s IC MSM80C31FVGS-V1K
IC9	8-759-232-94	s IC TC74HC245AF
IC10	8-759-926-48	s IC SN74HC244NS
IC11	8-759-926-48	s IC SN74HC244NS
IC12	8-759-926-48	s IC SN74HC244NS
IC13	8-759-926-67	s IC SN74HC374NS
IC14	8-759-747-55	s IC MBM27C256A-25-X
IC15	8-759-747-55	s IC MBM27C256A-25-X
IC17	8-759-926-11	s IC SN74HC138NS
IC18	8-759-926-42	s IC SN74HC238NS
IC19	8-759-926-42	s IC SN74HC238NS
IC20	8-759-926-67	s IC SN74HC374NS
IC21	8-759-926-67	s IC SN74HC374NS
IC22	8-759-926-67	s IC SN74HC374NS
IC23	8-759-926-67	s IC SN74HC374NS
IC24	8-759-926-67	s IC SN74HC374NS

## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC25	8-759-926-67	s IC SN74HC374NS
IC26	8-759-926-67	s IC SN74HC374NS
IC27	8-759-926-67	s IC SN74HC374NS
IC28	8-759-747-54	s IC UPD8749HC
IC29	8-759-926-67	s IC SN74HC374NS
IC30	8-759-926-67	s IC SN74HC374NS
IC31	8-759-926-67	s IC SN74HC374NS
IC32	8-759-711-15	s IC NJU8101M
IC33	8-759-926-67	s IC SN74HC374NS
IC34	8-759-926-67	s IC SN74HC374NS
IC35	8-759-926-67	s IC SN74HC374NS
IC36	8-759-711-15	s IC NJU8101M
IC37	8-759-926-67	s IC SN74HC374NS
IC38	8-759-747-54	s IC UPD8749HC
IC39	8-759-926-67	s IC SN74HC374NS
IC40	8-759-926-67	s IC SN74HC374NS
IC41	8-759-926-67	s IC SN74HC374NS
IC42	8-759-711-15	s IC NJU8101M
IC43	8-759-926-67	s IC SN74HC374NS
IC44	8-759-747-54	s IC UPD8749HC
IC45	8-759-926-67	s IC SN74HC374NS
IC46	8-759-926-67	s IC SN74HC374NS
IC47	8-759-926-67	s IC SN74HC374NS
IC48	8-759-711-15	s IC NJU8101M
IC49	8-759-009-20	s IC MC14082BF
IC50	8-759-926-42	s IC SN74HC238NS
IC52	8-759-009-05	s IC MC14051BF
IC53	8-759-926-67	s IC SN74HC374NS
IC54	8-759-926-67	s IC SN74HC374NS
IC55	8-759-009-05	s IC MC14051BF
IC56	8-759-009-05	s IC MC14051BF
IC57	8-759-926-48	s IC SN74HC244NS
IC58	8-759-926-48	s IC SN74HC244NS
IC59	8-759-926-48	s IC SN74HC244NS
IC60	8-759-926-48	s IC SN74HC244NS
IC61	8-759-926-11	s IC SN74HC138NS
IC62	8-759-926-67	s IC SN74HC374NS
IC63	8-759-926-67	s IC SN74HC374NS
IC64	8-759-926-11	s IC SN74HC138NS
IC65	8-759-711-15	s IC NJU8101M
IC66	8-759-926-67	s IC SN74HC374NS
IC67	8-759-926-11	s IC SN74HC138NS
IC68	8-759-926-67	s IC SN74HC374NS
IC69	8-759-926-67	s IC SN74HC374NS
IC70	8-759-926-67	s IC SN74HC374NS
IC71	8-759-926-67	s IC SN74HC374NS
IC74	8-759-926-67	s IC SN74HC374NS
IC75	8-759-926-67	s IC SN74HC374NS
IC76	8-759-906-54	s IC TL064CNS
IC77	8-759-906-54	s IC TL064CNS
IC78	8-759-906-54	s IC TL064CNS
IC79	8-759-906-54	s IC TL064CNS
IC80	8-759-906-54	s IC TL064CNS
IC81	8-759-906-54	s IC TL064CNS
IC82	8-759-926-48	s IC SN74HC244NS
IC83	8-759-926-48	s IC SN74HC244NS
IC84	8-759-926-48	s IC SN74HC244NS
IC85	8-759-926-48	s IC SN74HC244NS
IC86	8-759-009-05	s IC MC14051BF

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## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC87	8-759-926-48 s IC	SN74HC244NS
IC88	8-759-926-67 s IC	SN74HC374NS
IC89	8-759-926-67 s IC	SN74HC374NS
IC90	8-759-747-54 s IC	UPD8749HC
IC91	8-759-926-11 s IC	SN74HC138NS
IC92	8-759-926-42 s IC	SN74HC238NS
IC93	8-759-926-48 s IC	SN74HC244NS
IC95	8-759-926-48 s IC	SN74HC244NS
IC96	8-759-926-48 s IC	SN74HC244NS
IC97	8-759-926-67 s IC	SN74HC374NS
IC98	8-759-926-67 s IC	SN74HC374NS
IC99	8-759-926-67 s IC	SN74HC374NS
IC100	8-759-926-67 s IC	SN74HC374NS
IC101	8-759-926-67 s IC	SN74HC374NS
IC102	8-759-926-67 s IC	SN74HC374NS
IC103	8-759-711-15 s IC	NJU8101M
IC104	8-759-711-15 s IC	NJU8101M
IC105	8-759-926-67 s IC	SN74HC374NS
IC106	8-759-926-67 s IC	SN74HC374NS
IC107	8-759-926-67 s IC	SN74HC374NS
IC108	8-759-926-67 s IC	SN74HC374NS
IC109	8-759-711-15 s IC	NJU8101M
IC110	8-759-711-15 s IC	NJU8101M
IC112	8-759-926-17 s IC	SN74HC153NS
IC113	8-759-926-11 s IC	SN74HC138NS
IC114	8-759-906-54 s IC	TL064CNS
IC115	8-759-906-54 s IC	TL064CNS
IC116	8-759-906-54 s IC	TL064CNS
IC117	8-759-926-67 s IC	SN74HC374NS
IC118	8-759-200-79 s IC	TC4049BF
IC127	8-759-925-85 s IC	SN74HC32NS
IC128	8-759-200-79 s IC	TC4049BF
IC129	8-759-803-70 s IC	SN74HC08NS
IC131	8-759-926-11 s IC	SN74HC138NS
IC133	8-759-906-54 s IC	TL064CNS
IC134	8-759-009-07 s IC	MC14053BF
IC135	8-759-906-54 s IC	TL064CNS
IC136	8-759-009-07 s IC	MC14053BF
IC137	8-759-906-54 s IC	TL064CNS
IC138	8-759-009-07 s IC	MC14053BF
IC139	8-759-906-54 s IC	TL064CNS
IC140	8-759-009-07 s IC	MC14053BF
IC141	8-759-205-08 s IC	TC74HC86F
IC142	8-759-926-42 s IC	SN74HC238NS
IC143	8-759-009-46 s IC	MC14528BF
IC144	8-759-009-46 s IC	MC14528BF
IC145	8-759-009-46 s IC	MC14528BF
IC146	8-759-009-46 s IC	MC14528BF
Q1	8-729-216-22 s	TRANSISTOR 2SA1162
Q2	8-729-216-22 s	TRANSISTOR 2SA1162
Q3	8-729-216-22 s	TRANSISTOR 2SA1162
Q9	8-729-216-22 s	TRANSISTOR 2SA1162
Q10	8-729-216-22 s	TRANSISTOR 2SA1162
Q11	8-729-216-22 s	TRANSISTOR 2SA1162
Q12	8-729-216-22 s	TRANSISTOR 2SA1162
Q13	8-729-100-66 s	TRANSISTOR 2SC1623
Q14	8-729-100-66 s	TRANSISTOR 2SC1623
Q15	8-729-100-66 s	TRANSISTOR 2SC1623

## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q16	8-729-216-22 s	TRANSISTOR 2SA1162
Q17	8-729-100-66 s	TRANSISTOR 2SC1623
Q18	8-729-100-66 s	TRANSISTOR 2SC1623
Q19	8-729-100-66 s	TRANSISTOR 2SC1623
Q20	8-729-100-66 s	TRANSISTOR 2SC1623
Q21	8-729-100-66 s	TRANSISTOR 2SC1623
Q22	8-729-100-66 s	TRANSISTOR 2SC1623
Q23	8-729-100-66 s	TRANSISTOR 2SC1623
Q24	8-729-100-66 s	TRANSISTOR 2SC1623
Q25	8-729-216-22 s	TRANSISTOR 2SA1162
R1	1-216-091-00 s	METAL, CHIP 56K 5% 1/10W
R2	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R3	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R4	1-216-091-00 s	METAL, CHIP 56K 5% 1/10W
R5	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R6	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R7	1-216-091-00 s	METAL, CHIP 56K 5% 1/10W
R8	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R9	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R11	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R13	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R14	1-216-049-00 s	METAL, CHIP 1K 5% 1/10W
R15	1-216-083-00 s	METAL, CHIP 27K 5% 1/10W
R16	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R17	1-216-055-00 s	METAL, CHIP 1.8K 5% 1/10W
R18	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R19	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R23	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R24	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R25	1-216-059-00 s	METAL, CHIP 2.7K 5% 1/10W
R26	1-216-063-00 s	METAL, CHIP 3.9K 5% 1/10W
R27	1-216-063-00 s	METAL, CHIP 3.9K 5% 1/10W
R28	1-216-081-00 s	METAL, CHIP 22K 5% 1/10W
R29	1-216-077-00 s	METAL, CHIP 15K 5% 1/10W
R30	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R31	1-216-035-00 s	METAL, CHIP 270 5% 1/10W
R33	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R34	1-216-091-00 s	METAL, CHIP 56K 5% 1/10W
R35	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R36	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R37	1-216-097-00 s	METAL, CHIP 100K 5% 1/10W
R42	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R43	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R44	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R45	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R46	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R47	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R48	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R49	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R50	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R51	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R52	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R53	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R54	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R55	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R56	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R57	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R58	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R59	1-216-091-00 s	METAL, CHIP 56K 5% 1/10W

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

Ref. No. or Q'ty	Part No.	SP	Description						
R60	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R61	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R62	1-216-097-00	s	METAL, CHIP	100K	5%	1/10W			
R63	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R64	1-216-091-00	s	METAL, CHIP	56K	5%	1/10W			
R65	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R66	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R67	1-216-097-00	s	METAL, CHIP	100K	5%	1/10W			
R68	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R69	1-216-091-00	s	METAL, CHIP	56K	5%	1/10W			
R70	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R71	1-216-073-00	s	METAL, CHIP	10K	5%	1/10W			
R72	1-216-097-00	s	METAL, CHIP	100K	5%	1/10W			
R73	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R74	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R75	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R76	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R77	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R78	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R79	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R80	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R81	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R82	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R83	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R84	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R85	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R86	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R87	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R88	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R89	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R90	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R91	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R92	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R93	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R94	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R95	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R96	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R97	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R98	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R99	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R100	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R101	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R102	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R103	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R104	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R105	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R106	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R107	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R108	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R109	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R110	1-216-023-00	s	METAL, CHIP	82	5%	1/10W			
R111									

[illegible]

BVS-3200CP



## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R214	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R215	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R216	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R217	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R218	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R219	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R220	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R221	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R222	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R223	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R224	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R225	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R226	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R227	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R228	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R229	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R230	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R231	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R232	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R233	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R234	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R235	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R236	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R237	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R238	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R239	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R240	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R241	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R242	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R243	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R244	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R245	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R246	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R247	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R248	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R249	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R250	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R251	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R252	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R253	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R254	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R255	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R256	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R257	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R258	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R259	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R260	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R261	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R262	1-216-091-00	s METAL, CHIP 56K 5% 1/10W
R263	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R264	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R265	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R266	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R267	1-216-023-00	s METAL, CHIP 82 5% 1/10W
RV1	1-237-035-11	s RES, ADJ, METAL 5K
RY9	1-515-648-11	s RELAY, POWER (DS)
X1	1-567-796-11	s OSCILLATOR, CRYSTAL 14.7456MHz

## (SY-138 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
X2	1-567-864-11	s CRYSTAL, 10.737635MHz
X3	1-567-864-11	s CRYSTAL, 10.737635MHz
X4	1-567-864-11	s CRYSTAL, 10.737635MHz
X5	1-567-864-11	s CRYSTAL, 10.737635MHz

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## SY-154 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6268-376-A	o MOUNTED CIRCUIT BOARD, SY-154
C1	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C2	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C3	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C4	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C5	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C6	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C7	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C8	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C9	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C10	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C11	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C12	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C13	1-162-638-11	s CERAMIC, CHIP 1uF 16V
CN1	1-506-493-11	s CONNECTOR, 14P, MALE
CN2	1-506-485-11	s CONNECTOR, 6P, MALE
D1	8-719-102-51	s DIODE 1S251
IC1	8-759-926-67	s IC SN74HC374NS
IC2	8-759-926-67	s IC SN74HC374NS
IC3	8-759-926-67	s IC SN74HC374NS
IC4	8-759-926-67	s IC SN74HC374NS
IC5	8-759-103-95	s IC UPC648C
IC6	8-759-103-95	s IC UPC648C
IC7	8-759-906-54	s IC TL064CNS
IC8	8-759-906-54	s IC TL064CNS
IC9	8-759-906-54	s IC TL064CNS
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-100-66	s TRANSISTOR 2SC1623
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-100-66	s TRANSISTOR 2SC1623
R1	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R2	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R3	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R4	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R5	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R6	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R7	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R8	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R9	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R10	1-216-047-00	s METAL, CHIP 820 5% 1/10W
R11	1-216-051-00	s METAL, CHIP 1.2K 5% 1/10W
R12	1-216-069-00	s METAL, CHIP 6.8K 5% 1/10W
R13	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R14	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R15	1-216-069-00	s METAL, CHIP 6.8K 5% 1/10W
R16	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R17	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R18	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R19	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R20	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R21	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
RV1	1-237-036-11	s RES, ADJ, METAL 10K
RV2	1-237-033-11	s RES, ADJ, METAL 1K

## WP-27 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-248-A	o MOUNTED CIRCUIT BOARD, WP-27 (P)
1pc	2-139-140-01	o PLATE, SHIELD
1pc	2-182-909-01	o LEVER, PC BOARD
2pcs	3-621-124-00	o SPACER
1pc	7-626-320-11	o PIN, SPRING 3X8
2pcs	7-682-947-01	s SCREW +PSW 3X6
4pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C2	1-124-589-11	s ELECT 47uF 20% 16V
C4	1-124-589-11	s ELECT 47uF 20% 16V
C6	1-124-589-11	s ELECT 47uF 20% 16V
C7	1-131-365-00	s TANTALUM 10uF 10% 20V
C8	1-136-499-11	s FILM 0.047uF 5% 50V
C11	1-124-589-11	s ELECT 47uF 20% 16V
C13	1-124-589-11	s ELECT 47uF 20% 16V
C18	1-124-589-11	s ELECT 47uF 20% 16V
C21	1-124-589-11	s ELECT 47uF 20% 16V
C22	1-124-589-11	s ELECT 47uF 20% 16V
C24	1-124-589-11	s ELECT 47uF 20% 16V
C26	1-131-379-00	s TANTALUM 22uF 10% 10V
C28	1-124-589-11	s ELECT 47uF 20% 16V
C30	1-124-589-11	s ELECT 47uF 20% 16V
C36	1-124-589-11	s ELECT 47uF 20% 16V
C38	1-126-157-11	s ELECT 10uF 20% 16V
C53	1-124-589-11	s ELECT 47uF 20% 16V
C55	1-124-589-11	s ELECT 47uF 20% 16V
C57	1-124-589-11	s ELECT 47uF 20% 16V
C58	1-126-157-11	s ELECT 10uF 20% 16V
C59	1-126-157-11	s ELECT 10uF 20% 16V
C60	1-124-589-11	s ELECT 47uF 20% 16V
C62	1-124-589-11	s ELECT 47uF 20% 16V
C64	1-126-157-11	s ELECT 10uF 20% 16V
C66	1-124-589-11	s ELECT 47uF 20% 16V
C68	1-124-589-11	s ELECT 47uF 20% 16V
C71	1-124-589-11	s ELECT 47uF 20% 16V
C75	1-124-589-11	s ELECT 47uF 20% 16V
C76	1-124-589-11	s ELECT 47uF 20% 16V
C80	1-131-377-00	s TANTALUM 10uF 10% 10V
C82	1-131-377-00	s TANTALUM 10uF 10% 10V
C83	1-124-589-11	s ELECT 47uF 20% 16V
C93	1-124-589-11	s ELECT 47uF 20% 16V
C94	1-124-589-11	s ELECT 47uF 20% 16V
C101	1-124-589-11	s ELECT 47uF 20% 16V
C102	1-124-589-11	s ELECT 47uF 20% 16V
C109	1-124-589-11	s ELECT 47uF 20% 16V
C110	1-124-589-11	s ELECT 47uF 20% 16V
C120	1-124-589-11	s ELECT 47uF 20% 16V
C121	1-124-589-11	s ELECT 47uF 20% 16V
C122	1-124-589-11	s ELECT 47uF 20% 16V
C125	1-124-589-11	s ELECT 47uF 20% 16V
C126	1-107-085-00	s MICA 100PF 5% 50V
C130	1-163-081-00	s CERAMIC, CHIP 0.22uF 25V
C131	1-163-081-00	s CERAMIC, CHIP 0.22uF 25V
C132	1-163-081-00	s CERAMIC, CHIP 0.22uF 25V
C133	1-163-081-00	s CERAMIC, CHIP 0.22uF 25V
C638	1-107-085-00	s MICA 100PF 5% 50V
C640	1-124-589-11	s ELECT 47uF 20% 16V
C642	1-126-157-11	s ELECT 10uF 20% 16V
C643	1-163-033-00	s CERAMIC, CHIP 0.022uF 50V

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C644	1-126-157-11	s ELECT 10uF 20% 16V
C645	1-163-033-00	s CERAMIC, CHIP 0.022uF 50V
C650	1-124-589-11	s ELECT 47uF 20% 16V
C652	1-124-589-11	s ELECT 47uF 20% 16V
C654	1-107-085-00	s MICA 100PF 5% 50V
C701	1-126-157-11	s ELECT 10uF 20% 16V
C702	1-131-349-00	s TANTALUM 2.2uF 10% 35V
C707	1-124-589-11	s ELECT 47uF 20% 16V
C714	1-131-377-00	s TANTALUM 10uF 10% 10V
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN20	1-506-694-11	o HEADER 26P
CT1	1-141-260-00	s CAP, TRIMMER 50PF
D1	8-719-100-05	s DIODE 1S2837
D2	8-719-100-05	s DIODE 1S2837
D3	8-719-815-59	s DIODE 1S1555-S
D4	8-719-815-59	s DIODE 1S1555-S
D5	8-719-100-03	s DIODE 1S2835
D6	8-719-100-03	s DIODE 1S2835
D7	8-719-106-08	s DIODE RD6.2M-B2
D8	8-719-100-03	s DIODE 1S2835
D13	8-719-100-03	s DIODE 1S2835
D14	8-719-800-76	s DIODE 1SS226
D15	8-719-800-76	s DIODE 1SS226
D16	8-719-800-76	s DIODE 1SS226
D17	8-719-800-76	s DIODE 1SS226
D28	8-719-100-05	s DIODE 1S2837
D601	8-719-105-91	s DIODE RD5.6M-B2
D602	8-719-105-91	s DIODE RD5.6M-B2
D603	8-719-105-91	s DIODE RD5.6M-B2
D604	8-719-105-91	s DIODE RD5.6M-B2
D605	8-719-105-91	s DIODE RD5.6M-B2
D606	8-719-105-91	s DIODE RD5.6M-B2
D607	8-719-105-91	s DIODE RD5.6M-B2
D608	8-719-105-91	s DIODE RD5.6M-B2
D609	8-719-105-32	s DIODE RD2.7M-B2
D610	8-719-100-05	s DIODE 1S2837
D611	8-719-105-91	s DIODE RD5.6M-B2
D612	8-719-105-91	s DIODE RD5.6M-B2
D613	8-719-105-91	s DIODE RD5.6M-B2
D614	8-719-105-91	s DIODE RD5.6M-B2
D615	8-719-100-05	s DIODE 1S2837
D616	8-719-100-05	s DIODE 1S2837
D701	8-719-100-03	s DIODE 1S2835
D702	8-719-800-76	s DIODE 1SS226
D703	8-719-800-76	s DIODE 1SS226
D704	8-719-100-03	s DIODE 1S2835
D705	8-719-800-76	s DIODE 1SS226
D706	8-719-800-76	s DIODE 1SS226
D707	8-719-800-76	s DIODE 1SS226
D708	8-719-800-76	s DIODE 1SS226
D709	8-719-800-76	s DIODE 1SS226
FL601	1-235-585-11	s FILTER, LOW PASS
IC1	8-759-908-17	s IC TL082CPS
IC2	8-759-982-44	s IC RC79L05A
IC3	8-759-114-06	s IC UPC814G2-1
IC4	8-759-984-88	s IC LM6361M

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC5	8-759-939-40	s IC LM3046N
IC6	8-759-984-88	s IC LM6361M
IC7	8-759-984-88	s IC LM6361M
IC8	8-759-984-88	s IC LM6361M
IC9	8-759-908-17	s IC TL082CPS
IC10	8-759-114-06	s IC UPC814G2-1
IC11	8-759-114-06	s IC UPC814G2-1
IC12	8-759-114-06	s IC UPC814G2-1
IC13	8-759-009-05	s IC MC14051BF
IC14	8-759-009-05	s IC MC14051BF
IC15	8-759-014-96	s IC MC1496P
IC16	8-759-908-17	s IC TL082CPS
IC17	8-759-114-06	s IC UPC814G2-1
IC18	8-759-114-06	s IC UPC814G2-1
IC19	8-759-009-07	s IC MC14053BF
IC20	8-759-908-17	s IC TL082CPS
IC21	8-759-009-07	s IC MC14053BF
IC22	8-759-746-86	s IC 27C128-25
IC23	8-759-250-20	s IC TC5020BP
IC24	8-759-250-20	s IC TC5020BP
IC25	8-759-982-21	s IC RC78L05A
IC26	8-759-908-17	s IC TL082CPS
IC27	8-759-014-96	s IC MC1496P
IC28	8-759-114-06	s IC UPC814G2-1
IC29	8-759-009-07	s IC MC14053BF
IC30	8-759-908-17	s IC TL082CPS
IC31	8-759-908-17	s IC TL082CPS
IC36	8-759-908-17	s IC TL082CPS
IC37	8-759-908-17	s IC TL082CPS
IC38	8-759-009-07	s IC MC14053BF
IC39	8-759-908-17	s IC TL082CPS
IC40	8-759-009-06	s IC MC14052BF
IC41	8-759-908-17	s IC TL082CPS
IC42	8-759-908-17	s IC TL082CPS
IC43	8-759-908-17	s IC TL082CPS
IC44	8-759-908-17	s IC TL082CPS
IC45	8-759-908-17	s IC TL082CPS
IC46	8-759-908-17	s IC TL082CPS
IC47	8-759-908-17	s IC TL082CPS
IC48	8-759-908-17	s IC TL082CPS
IC49	8-759-114-06	s IC UPC814G2-1
IC50	8-759-114-06	s IC UPC814G2-1
IC51	8-759-008-67	s IC MC14066BF
IC52	8-759-008-67	s IC MC14066BF
IC53	8-759-008-67	s IC MC14066BF
IC55	8-759-114-06	s IC UPC814G2-1
IC56	8-759-009-06	s IC MC14052BF
IC57	8-759-114-06	s IC UPC814G2-1
IC60	8-759-008-67	s IC MC14066BF
IC61	8-759-008-67	s IC MC14066BF
IC62	8-759-008-67	s IC MC14066BF
IC63	8-759-114-06	s IC UPC814G2-1
IC64	8-759-009-06	s IC MC14052BF
IC67	8-759-114-06	s IC UPC814G2-1
IC68	8-759-008-67	s IC MC14066BF
IC69	8-759-008-67	s IC MC14066BF
IC70	8-759-008-67	s IC MC14066BF
IC72	8-759-114-06	s IC UPC814G2-1
IC73	8-759-009-06	s IC MC14052BF

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC74	8-759-114-06	s IC UPC814G2-1
IC77	8-759-008-67	s IC MC14066BF
IC78	8-759-008-67	s IC MC14066BF
IC79	8-759-008-67	s IC MC14066BF
IC80	8-759-114-06	s IC UPC814G2-1
IC82	8-759-114-06	s IC UPC814G2-1
IC83	8-759-009-06	s IC MC14052BF
IC84	8-759-114-06	s IC UPC814G2-1
IC85	8-759-114-06	s IC UPC814G2-1
IC601	8-759-205-31	s IC TC74HC373F
IC602	8-759-205-31	s IC TC74HC373F
IC603	8-759-205-31	s IC TC74HC373F
IC604	8-759-926-48	s IC SN74HC244NS
IC605	8-759-746-88	s IC UPD8749HD
IC606	8-759-926-48	s IC SN74HC244NS
IC607	8-759-926-48	s IC SN74HC244NS
IC608	8-759-921-85	s IC SN74HC4515NT
IC609	8-759-233-87	s IC TC74HCT7007AF
IC610	8-759-206-28	s IC TC74HC123F
IC611	8-759-274-76	s IC TC7476BP
IC612	8-759-926-67	s IC SN74HC374NS
IC613	8-759-926-67	s IC SN74HC374NS
IC614	8-759-926-67	s IC SN74HC374NS
IC615	8-759-926-67	s IC SN74HC374NS
IC616	8-759-971-94	s IC MBM27C256A-25CZ
IC617	8-759-971-94	s IC MBM27C256A-25CZ
IC620	8-759-233-87	s IC TC74HCT7007AF
IC621	8-759-926-23	s IC SN74HC163NS
IC622	8-759-009-37	s IC MC14512BF
IC623	8-759-233-87	s IC TC74HCT7007AF
IC624	8-759-233-87	s IC TC74HCT7007AF
IC625	8-759-009-37	s IC MC14512BF
IC628	8-759-205-39	s IC TC74HC4049F
IC629	8-759-209-13	s IC TC4042BF
IC630	8-759-803-70	s IC SN74HC08NS
IC631	8-752-306-51	s IC CX23065
IC632	8-759-948-01	s IC 74F04SJ
IC633	8-759-917-49	s IC 74F112PC
IC634	8-752-304-30	s IC CX23043
IC635	8-759-915-41	s IC 74F02PC
IC636	8-752-304-30	s IC CX23043
IC637	8-759-009-07	s IC MC14053BF
IC640	8-759-009-07	s IC MC14053BF
IC641	8-759-009-07	s IC MC14053BF
IC701	8-759-233-87	s IC TC74HCT7007AF
IC702	8-759-908-17	s IC TL082CPS
IC703	8-759-908-17	s IC TL082CPS
IC704	8-759-908-17	s IC TL082CPS
IC705	8-759-908-17	s IC TL082CPS
IC706	8-759-908-17	s IC TL082CPS
IC707	8-759-908-17	s IC TL082CPS
IC708	8-759-908-92	s IC TL084CNS
IC709	8-759-908-92	s IC TL084CNS
IC710	8-759-908-92	s IC TL084CNS
IC711	8-759-908-92	s IC TL084CNS
IC712	8-759-908-17	s IC TL082CPS
IC713	8-759-008-99	s IC MC14042BF
JR601	1-216-295-00	s METAL, CHIP 0-OHM

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
JR603	1-216-295-00	s METAL, CHIP 0-OHM
JR605	1-216-295-00	s METAL, CHIP 0-OHM
JR607	1-216-295-00	s METAL, CHIP 0-OHM
JR609	1-216-295-00	s METAL, CHIP 0-OHM
JR612	1-216-295-00	s METAL, CHIP 0-OHM
JR613	1-216-295-00	s METAL, CHIP 0-OHM
JR616	1-216-295-00	s METAL, CHIP 0-OHM
JR617	1-216-295-00	s METAL, CHIP 0-OHM
JR619	1-216-295-00	s METAL, CHIP 0-OHM
JR622	1-216-295-00	s METAL, CHIP 0-OHM
JR624	1-216-295-00	s METAL, CHIP 0-OHM
JR625	1-216-295-00	s METAL, CHIP 0-OHM
JR627	1-216-295-00	s METAL, CHIP 0-OHM
JR630	1-216-295-00	s METAL, CHIP 0-OHM
JR631	1-216-295-00	s METAL, CHIP 0-OHM
JR634	1-216-295-00	s METAL, CHIP 0-OHM
JR636	1-216-295-00	s METAL, CHIP 0-OHM
JR638	1-216-295-00	s METAL, CHIP 0-OHM
JR640	1-216-295-00	s METAL, CHIP 0-OHM
JR641	1-216-295-00	s METAL, CHIP 0-OHM
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-216-22	s TRANSISTOR 2SA1162
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-216-22	s TRANSISTOR 2SA1162
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-100-66	s TRANSISTOR 2SC1623
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-100-66	s TRANSISTOR 2SC1623
Q9	8-729-175-73	s TRANSISTOR 2SC2757
Q10	8-729-112-65	s TRANSISTOR 2SA1462
Q11	8-729-112-65	s TRANSISTOR 2SA1462
Q12	8-729-175-73	s TRANSISTOR 2SC2757
Q14	8-729-100-66	s TRANSISTOR 2SC1623
Q15	8-729-216-22	s TRANSISTOR 2SA1162
Q16	8-729-100-66	s TRANSISTOR 2SC1623
Q17	8-729-216-22	s TRANSISTOR 2SA1162
Q18	8-729-100-66	s TRANSISTOR 2SC1623
Q19	8-729-100-66	s TRANSISTOR 2SC1623
Q20	8-729-100-66	s TRANSISTOR 2SC1623
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-100-66	s TRANSISTOR 2SC1623
Q35	8-729-175-73	s TRANSISTOR 2SC2757
Q36	8-729-112-65	s TRANSISTOR 2SA1462
Q37	8-729-112-65	s TRANSISTOR 2SA1462
Q38	8-729-175-73	s TRANSISTOR 2SC2757
Q39	8-729-112-65	s TRANSISTOR 2SA1462
Q40	8-729-100-66	s TRANSISTOR 2SC1623
Q41	8-729-100-66	s TRANSISTOR 2SC1623
Q42	8-729-100-66	s TRANSISTOR 2SC1623
Q43	8-729-100-66	s TRANSISTOR 2SC1623
Q56	8-729-216-22	s TRANSISTOR 2SA1162
Q57	8-729-216-22	s TRANSISTOR 2SA1162
Q60	8-729-100-66	s TRANSISTOR 2SC1623
Q61	8-729-100-66	s TRANSISTOR 2SC1623
Q62	8-729-100-66	s TRANSISTOR 2SC1623
Q63	8-729-100-66	s TRANSISTOR 2SC1623

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q64	8-729-100-66 s	TRANSISTOR 2SC1623
Q65	8-729-100-66 s	TRANSISTOR 2SC1623
Q66	8-729-216-22 s	TRANSISTOR 2SA1162
Q67	8-729-216-22 s	TRANSISTOR 2SA1162
Q68	8-729-216-22 s	TRANSISTOR 2SA1162
Q69	8-729-175-73 s	TRANSISTOR 2SC2757
Q70	8-729-175-73 s	TRANSISTOR 2SC2757
Q71	8-729-175-73 s	TRANSISTOR 2SC2757
Q72	8-729-216-22 s	TRANSISTOR 2SA1162
Q73	8-729-216-22 s	TRANSISTOR 2SA1162
Q74	8-729-216-22 s	TRANSISTOR 2SA1162
Q75	8-729-216-22 s	TRANSISTOR 2SA1162
Q76	8-729-175-73 s	TRANSISTOR 2SC2757
Q77	8-729-175-73 s	TRANSISTOR 2SC2757
Q78	8-729-175-73 s	TRANSISTOR 2SC2757
Q79	8-729-216-22 s	TRANSISTOR 2SA1162
Q80	8-729-216-22 s	TRANSISTOR 2SA1162
Q81	8-729-216-22 s	TRANSISTOR 2SA1162
Q82	8-729-216-22 s	TRANSISTOR 2SA1162
Q83	8-729-175-73 s	TRANSISTOR 2SC2757
Q84	8-729-175-73 s	TRANSISTOR 2SC2757
Q85	8-729-175-73 s	TRANSISTOR 2SC2757
Q86	8-729-216-22 s	TRANSISTOR 2SA1162
Q87	8-729-216-22 s	TRANSISTOR 2SA1162
Q88	8-729-216-22 s	TRANSISTOR 2SA1162
Q89	8-729-216-22 s	TRANSISTOR 2SA1162
Q90	8-729-175-73 s	TRANSISTOR 2SC2757
Q91	8-729-175-73 s	TRANSISTOR 2SC2757
Q92	8-729-175-73 s	TRANSISTOR 2SC2757
Q93	8-729-216-22 s	TRANSISTOR 2SA1162
Q95	8-729-100-66 s	TRANSISTOR 2SC1623
Q96	8-729-100-66 s	TRANSISTOR 2SC1623
Q97	8-729-100-66 s	TRANSISTOR 2SC1623
Q98	8-729-100-66 s	TRANSISTOR 2SC1623
Q601	8-729-100-66 s	TRANSISTOR 2SC1623
Q602	8-729-100-66 s	TRANSISTOR 2SC1623
Q603	8-729-100-66 s	TRANSISTOR 2SC1623
Q604	8-729-100-66 s	TRANSISTOR 2SC1623
Q605	8-729-100-66 s	TRANSISTOR 2SC1623
Q606	8-729-100-66 s	TRANSISTOR 2SC1623
Q701	8-729-100-66 s	TRANSISTOR 2SC1623
Q702	8-729-100-66 s	TRANSISTOR 2SC1623
Q703	8-729-216-22 s	TRANSISTOR 2SA1162
Q704	8-729-100-66 s	TRANSISTOR 2SC1623
Q705	8-729-100-66 s	TRANSISTOR 2SC1623
Q706	8-729-216-22 s	TRANSISTOR 2SA1162
Q707	8-729-216-22 s	TRANSISTOR 2SA1162
Q708	8-729-216-22 s	TRANSISTOR 2SA1162
Q709	8-729-216-22 s	TRANSISTOR 2SA1162
Q710	8-729-100-66 s	TRANSISTOR 2SC1623
Q711	8-729-100-66 s	TRANSISTOR 2SC1623
Q712	8-729-100-66 s	TRANSISTOR 2SC1623
Q713	8-729-216-22 s	TRANSISTOR 2SA1162
Q714	8-729-216-22 s	TRANSISTOR 2SA1162
Q715	8-729-216-22 s	TRANSISTOR 2SA1162
Q716	8-729-216-22 s	TRANSISTOR 2SA1162
Q717	8-729-100-66 s	TRANSISTOR 2SC1623
Q718	8-729-100-66 s	TRANSISTOR 2SC1623
Q719	8-729-100-66 s	TRANSISTOR 2SC1623

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q720	8-729-100-66 s	TRANSISTOR 2SC1623
Q721	8-729-100-66 s	TRANSISTOR 2SC1623
Q722	8-729-216-22 s	TRANSISTOR 2SA1162
Q723	8-729-100-66 s	TRANSISTOR 2SC1623
Q724	8-729-100-66 s	TRANSISTOR 2SC1623
Q725	8-729-216-22 s	TRANSISTOR 2SA1162
Q726	8-729-216-22 s	TRANSISTOR 2SA1162
Q727	8-729-216-22 s	TRANSISTOR 2SA1162
Q728	8-729-216-22 s	TRANSISTOR 2SA1162
Q729	8-729-100-66 s	TRANSISTOR 2SC1623
Q730	8-729-100-66 s	TRANSISTOR 2SC1623
Q731	8-729-100-66 s	TRANSISTOR 2SC1623
Q732	8-729-216-22 s	TRANSISTOR 2SA1162
Q733	8-729-216-22 s	TRANSISTOR 2SA1162
Q734	8-729-216-22 s	TRANSISTOR 2SA1162
Q735	8-729-216-22 s	TRANSISTOR 2SA1162
Q736	8-729-100-66 s	TRANSISTOR 2SC1623
Q737	8-729-100-66 s	TRANSISTOR 2SC1623
Q738	8-729-100-66 s	TRANSISTOR 2SC1623
Q739	8-729-100-66 s	TRANSISTOR 2SC1623
Q740	8-729-100-66 s	TRANSISTOR 2SC1623
Q741	8-729-100-66 s	TRANSISTOR 2SC1623
Q742	8-729-100-66 s	TRANSISTOR 2SC1623
Q743	8-729-100-66 s	TRANSISTOR 2SC1623
Q744	8-729-216-22 s	TRANSISTOR 2SA1162
Q745	8-729-216-22 s	TRANSISTOR 2SA1162
Q746	8-729-216-22 s	TRANSISTOR 2SA1162
Q747	8-729-100-66 s	TRANSISTOR 2SC1623
Q748	8-729-100-66 s	TRANSISTOR 2SC1623
Q749	8-729-100-66 s	TRANSISTOR 2SC1623
Q750	8-729-100-66 s	TRANSISTOR 2SC1623
Q751	8-729-100-66 s	TRANSISTOR 2SC1623
Q752	8-729-100-66 s	TRANSISTOR 2SC1623
Q753	8-729-100-66 s	TRANSISTOR 2SC1623
Q754	8-729-100-66 s	TRANSISTOR 2SC1623
Q755	8-729-100-66 s	TRANSISTOR 2SC1623
Q756	8-729-140-96 s	TRANSISTOR 2SD774-4
Q757	8-729-100-66 s	TRANSISTOR 2SC1623
Q758	8-729-100-66 s	TRANSISTOR 2SC1623
R31	1-216-105-00 s	METAL, CHIP 220K 5% 1/10W
R34	1-216-309-00 s	METAL 5.6 5% 1/10W
R41	1-216-302-00 s	METAL 2.7 5% 1/10W
R45	1-216-302-00 s	METAL 2.7 5% 1/10W
RV1	1-237-036-11 s	RES, ADJ, METAL 10K
RV3	1-237-036-11 s	RES, ADJ, METAL 10K
RV4	1-237-032-11 s	RES, ADJ, METAL 500
RV5	1-237-033-11 s	RES, ADJ, METAL 1K
RV6	1-237-036-11 s	RES, ADJ, METAL 10K
RV7	1-237-038-11 s	RES, ADJ, METAL 50K
RV8	1-237-034-11 s	RES, ADJ, METAL 2K
RV9	1-237-036-11 s	RES, ADJ, METAL 10K
RV10	1-237-036-11 s	RES, ADJ, METAL 10K
RV12	1-237-036-11 s	RES, ADJ, METAL 10K
RV13	1-237-032-11 s	RES, ADJ, METAL 500
RV14	1-237-033-11 s	RES, ADJ, METAL 1K
RV15	1-237-034-11 s	RES, ADJ, METAL 2K
RV16	1-237-034-11 s	RES, ADJ, METAL 2K
RV17	1-237-033-11 s	RES, ADJ, METAL 1K

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV18	1-237-033-11	s RES, ADJ, METAL 1K
RV19	1-237-033-11	s RES, ADJ, METAL 1K
RV20	1-237-036-11	s RES, ADJ, METAL 10K
RV22	1-237-035-11	s RES, ADJ, METAL 5K
RV23	1-237-035-11	s RES, ADJ, METAL 5K
RV24	1-237-035-11	s RES, ADJ, METAL 5K
RV25	1-237-035-11	s RES, ADJ, METAL 5K
RV26	1-237-033-11	s RES, ADJ, METAL 1K
RV27	1-237-035-11	s RES, ADJ, METAL 5K
RV28	1-237-035-11	s RES, ADJ, METAL 5K
RV29	1-237-035-11	s RES, ADJ, METAL 5K
RV30	1-237-035-11	s RES, ADJ, METAL 5K
RV35	1-237-032-11	s RES, ADJ, METAL 500
RV36	1-237-033-11	s RES, ADJ, METAL 1K
RV37	1-237-037-11	s RES, ADJ, METAL 20K
RV38	1-237-037-11	s RES, ADJ, METAL 20K
RV39	1-237-035-11	s RES, ADJ, METAL 5K
RV40	1-237-035-11	s RES, ADJ, METAL 5K
RV41	1-237-032-11	s RES, ADJ, METAL 500
RV42	1-237-032-11	s RES, ADJ, METAL 500
RV43	1-237-032-11	s RES, ADJ, METAL 500
RV44	1-237-032-11	s RES, ADJ, METAL 500
RV45	1-237-032-11	s RES, ADJ, METAL 500
RV46	1-237-032-11	s RES, ADJ, METAL 500
RV47	1-237-032-11	s RES, ADJ, METAL 500
RV48	1-237-032-11	s RES, ADJ, METAL 500
RV49	1-237-032-11	s RES, ADJ, METAL 500
RV50	1-237-036-11	s RES, ADJ, METAL 10K
RV51	1-237-036-11	s RES, ADJ, METAL 10K
RV52	1-237-033-11	s RES, ADJ, METAL 1K
RV53	1-237-032-11	s RES, ADJ, METAL 500
RV54	1-237-039-11	s RES, ADJ, METAL 100K
RV55	1-237-033-11	s RES, ADJ, METAL 1K
RV56	1-237-032-11	s RES, ADJ, METAL 500
RV57	1-237-037-11	s RES, ADJ, METAL 20K
RV58	1-237-033-11	s RES, ADJ, METAL 1K
RV59	1-237-032-11	s RES, ADJ, METAL 500
RV60	1-237-039-11	s RES, ADJ, METAL 100K
RV61	1-237-033-11	s RES, ADJ, METAL 1K
RV62	1-237-032-11	s RES, ADJ, METAL 500
RV63	1-237-037-11	s RES, ADJ, METAL 20K
RV64	1-237-032-11	s RES, ADJ, METAL 500
RV65	1-237-037-11	s RES, ADJ, METAL 20K
RV66	1-237-037-11	s RES, ADJ, METAL 20K
RV601	1-237-039-11	s RES, ADJ, METAL 100K
RV602	1-237-037-11	s RES, ADJ, METAL 20K
RV603	1-237-037-11	s RES, ADJ, METAL 20K
RV701	1-237-031-11	s RES, ADJ, METAL 200
RV702	1-237-034-11	s RES, ADJ, METAL 2K
RV703	1-237-032-11	s RES, ADJ, METAL 500
RV704	1-237-031-11	s RES, ADJ, METAL 200
RV705	1-237-034-11	s RES, ADJ, METAL 2K
RV706	1-237-032-11	s RES, ADJ, METAL 500
RV707	1-237-031-11	s RES, ADJ, METAL 200
RV708	1-237-034-11	s RES, ADJ, METAL 2K
RV709	1-237-032-11	s RES, ADJ, METAL 500
RV710	1-237-031-11	s RES, ADJ, METAL 200
RV711	1-237-034-11	s RES, ADJ, METAL 2K
RV712	1-237-032-11	s RES, ADJ, METAL 500

## (WP-27 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RV713	1-237-037-11	s RES, ADJ, METAL 20K
RV714	1-237-037-11	s RES, ADJ, METAL 20K
RV715	1-237-036-11	s RES, ADJ, METAL 10K
RV716	1-237-034-11	s RES, ADJ, METAL 2K
RV717	1-237-036-11	s RES, ADJ, METAL 10K
RV718	1-237-034-11	s RES, ADJ, METAL 2K
RV719	1-237-036-11	s RES, ADJ, METAL 10K
RV720	1-237-034-11	s RES, ADJ, METAL 2K
RV721	1-237-036-11	s RES, ADJ, METAL 10K
RV722	1-237-034-11	s RES, ADJ, METAL 2K
RV723	1-237-036-11	s RES, ADJ, METAL 10K
X601	1-527-992-21	s OSCILLATOR, CERAMIC (EITH CAP)
X602	1-567-597-11	s OSCILLATOR, CRYSTAL

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

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CN-330 BOARD  
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Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-265-A	o MOUNTED CIRCUIT BOARD, CN-330
1pc	2-139-125-01	o BRACKET (C), BNC
3pcs	7-682-947-01	s SCREW +PSW 3X6
C1	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C2	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C3	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C4	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C5	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C6	1-131-353-00	s TANTALUM 10uF 10% 35V
C7	1-131-353-00	s TANTALUM 10uF 10% 35V
C8	1-131-353-00	s TANTALUM 10uF 10% 35V
C9	1-131-353-00	s TANTALUM 10uF 10% 35V
C10	1-131-353-00	s TANTALUM 10uF 10% 35V
C11	1-131-353-00	s TANTALUM 10uF 10% 35V
C24	1-124-589-11	s ELECT 47uF 20% 16V
C25	1-124-589-11	s ELECT 47uF 20% 16V
CN1	1-506-481-11	s CONNECTOR, 2P, MALE
CN2	1-506-487-11	o CONNECTOR, 8P, MALE
CN3	1-506-481-11	o CONNECTOR, 2P, MALE
CN4	1-506-485-11	s CONNECTOR, 6P, MALE
CN5	1-506-487-11	s CONNECTOR, 8P, MALE
CN6	1-563-354-11	s CONNECTOR, BNC
CN7	1-563-354-11	s CONNECTOR, BNC
CN8	1-563-354-11	s CONNECTOR, BNC
CN9	1-563-354-11	s CONNECTOR, BNC
CN10	1-563-354-11	s CONNECTOR, BNC
CN11	1-563-354-11	s CONNECTOR, BNC
CN12	1-563-354-11	s CONNECTOR, BNC
CN13	1-563-354-11	s CONNECTOR, BNC
CN14	1-563-354-11	s CONNECTOR, BNC
CN15	1-563-354-11	s CONNECTOR, BNC
CN16	1-563-354-11	s CONNECTOR, BNC
CN17	1-563-354-11	s CONNECTOR, BNC
CN18	1-563-354-11	s CONNECTOR, BNC
L5	1-410-723-61	s CHIP INDUCTOR 330UF
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-100-66	s TRANSISTOR 2SC1623
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-112-65	s TRANSISTOR 2SA1462
Q7	8-729-112-65	s TRANSISTOR 2SA1462
Q8	8-729-112-65	s TRANSISTOR 2SA1462
Q9	8-729-112-65	s TRANSISTOR 2SA1462
Q10	8-729-112-65	s TRANSISTOR 2SA1462
R26	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R27	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R28	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R29	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R30	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W

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CN-332 BOARD  
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Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-263-A	s MOUNTED CIRCUIT BOARD, CN-332
20pcs	3-654-545-00	s SPACER, BNC
4pcs	7-682-947-01	s SCREW +PSW 3X6
C11	1-124-589-11	s ELECT 47uF 20% 16V
C12	1-124-589-11	s ELECT 47uF 20% 16V
CN1	1-506-471-11	s CONNECTOR, 6P, MALE
CN2	1-506-471-11	s CONNECTOR, 6P, MALE
CN3	1-506-471-11	s CONNECTOR, 6P, MALE
CN4	1-506-473-11	s CONNECTOR, 8P, MALE
CN5	1-506-471-11	s CONNECTOR, 6P, MALE
CN6	1-506-469-11	s CONNECTOR, 4P, MALE
CN7	1-506-471-11	s CONNECTOR, 6P, MALE
CN8	1-506-471-11	s CONNECTOR, 6P, MALE
CN9	1-506-469-11	s CONNECTOR, 4P, MALE
CN10	1-506-469-11	s CONNECTOR, 4P, MALE
CN11	1-506-469-11	s CONNECTOR, 4P, MALE
CN12	1-506-473-11	s CONNECTOR, 8P, MALE
CN13	1-506-468-11	s CONNECTOR, 3P, MALE
CN14	1-562-227-31	s RECEPTACLE, BNC
CN15	1-564-407-21	s CONNECTOR (R-M)
CN16	1-562-227-31	s RECEPTACLE, BNC
CN17	1-564-407-21	s CONNECTOR (R-M)
CN18	1-562-227-31	s RECEPTACLE, BNC
CN19	1-564-407-21	s CONNECTOR (R-M)
CN20	1-562-227-31	s RECEPTACLE, BNC
CN21	1-562-160-21	s CONNECTOR (R-F) 12P
CN22	1-562-227-31	s RECEPTACLE, BNC
CN23	1-562-227-31	s RECEPTACLE, BNC
CN24	1-562-227-31	s RECEPTACLE, BNC
CN25	1-562-227-31	s RECEPTACLE, BNC
CN26	1-564-407-21	s CONNECTOR (R-M)
CN27	1-562-227-31	s RECEPTACLE, BNC
CN28	1-562-227-31	s RECEPTACLE, BNC
CN29	1-562-227-31	s RECEPTACLE, BNC
CN30	1-564-407-21	s CONNECTOR (R-M)
CN31	1-562-227-31	s RECEPTACLE, BNC
CN32	1-562-227-31	s RECEPTACLE, BNC
CN33	1-562-227-31	s RECEPTACLE, BNC
CN34	1-562-227-31	s RECEPTACLE, BNC
CN35	1-562-227-31	s RECEPTACLE, BNC
CN36	1-562-160-21	s CONNECTOR (R-F) 12P
CN37	1-562-227-31	s RECEPTACLE, BNC
CN38	1-562-227-31	s RECEPTACLE, BNC
CN39	1-562-227-31	s RECEPTACLE, BNC
CN40	1-562-227-31	s RECEPTACLE, BNC
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-112-65	s TRANSISTOR 2SA1462
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-112-65	s TRANSISTOR 2SA1462
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-112-65	s TRANSISTOR 2SA1462
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-112-65	s TRANSISTOR 2SA1462
Q9	8-729-100-66	s TRANSISTOR 2SC1623
Q10	8-729-112-65	s TRANSISTOR 2SA1462
Q11	8-729-100-66	s TRANSISTOR 2SC1623
Q12	8-729-112-65	s TRANSISTOR 2SA1462
Q13	8-729-100-66	s TRANSISTOR 2SC1623

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (CN-332 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q14	8-729-112-65	s TRANSISTOR 2SA1462
Q15	8-729-100-66	s TRANSISTOR 2SC1623
Q16	8-729-112-65	s TRANSISTOR 2SA1462
Q17	8-729-100-66	s TRANSISTOR 2SC1623
Q18	8-729-112-65	s TRANSISTOR 2SA1462
Q19	8-729-100-66	s TRANSISTOR 2SC1623
Q20	8-729-112-65	s TRANSISTOR 2SA1462
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-112-65	s TRANSISTOR 2SA1462
Q23	8-729-100-66	s TRANSISTOR 2SC1623
Q24	8-729-112-65	s TRANSISTOR 2SA1462
Q25	8-729-100-66	s TRANSISTOR 2SC1623
Q26	8-729-112-65	s TRANSISTOR 2SA1462
Q27	8-729-100-66	s TRANSISTOR 2SC1623
Q28	8-729-112-65	s TRANSISTOR 2SA1462
Q29	8-729-100-66	s TRANSISTOR 2SC1623
Q30	8-729-112-65	s TRANSISTOR 2SA1462
Q31	8-729-216-22	s TRANSISTOR 2SA1162
R81	1-215-394-00	s METAL 75 1% 1/6W
R82	1-215-394-00	s METAL 75 1% 1/6W
R83	1-215-394-00	s METAL 75 1% 1/6W
R84	1-215-394-00	s METAL 75 1% 1/6W
R85	1-215-394-00	s METAL 75 1% 1/6W
R86	1-215-394-00	s METAL 75 1% 1/6W
R87	1-215-394-00	s METAL 75 1% 1/6W
R88	1-215-394-00	s METAL 75 1% 1/6W
R89	1-215-394-00	s METAL 75 1% 1/6W
R90	1-215-394-00	s METAL 75 1% 1/6W
R91	1-215-394-00	s METAL 75 1% 1/6W
R92	1-215-394-00	s METAL 75 1% 1/6W
R93	1-215-394-00	s METAL 75 1% 1/6W
S1	1-554-949-11	s SWITCH, SLIDE

## CN-333 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-262-A	o MOUNTED CIRCUIT BOARD, CN-333 (P)
2pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C10	1-124-589-11	s ELECT 47uF 20% 16V
C11	1-107-085-00	s MICA 100PF 5% 50V
C14	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C18	1-126-157-11	s ELECT 10uF 20% 16V
C20	1-126-157-11	s ELECT 10uF 20% 16V
C22	1-107-085-00	s MICA 100PF 5% 50V
C25	1-126-157-11	s ELECT 10uF 20% 16V
C26	1-126-157-11	s ELECT 10uF 20% 16V
C27	1-126-157-11	s ELECT 10uF 20% 16V
C28	1-126-157-11	s ELECT 10uF 20% 16V
C29	1-107-211-00	s MICA 24PF 5% 500V
C32	1-107-211-00	s MICA 24PF 5% 500V
C33	1-107-211-00	s MICA 24PF 5% 500V
C38	1-107-211-00	s MICA 24PF 5% 500V
C39	1-107-211-00	s MICA 24PF 5% 500V
C42	1-107-211-00	s MICA 24PF 5% 500V
C43	1-107-211-00	s MICA 24PF 5% 500V
C46	1-107-211-00	s MICA 24PF 5% 500V
C58	1-126-157-11	s ELECT 10uF 20% 16V
C59	1-126-157-11	s ELECT 10uF 20% 16V
C63	1-107-090-00	s MICA 160PF 5% 50V
C64	1-107-090-00	s MICA 160PF 5% 50V
C67	1-162-638-11	s CERAMIC, CHIP 1uF 16V
CN1	1-506-745-11	s PIN, DIN CONNECTOR (DIP) 32P
D1	8-719-800-76	s DIODE 1SS226
D2	8-719-800-76	s DIODE 1SS226
DL1	1-415-316-00	s DELAY LINE 200nS
FL1	1-235-584-11	s FILTER, LOW PASS
IC2	8-759-009-67	s IC MC14584BF
IC3	8-759-009-67	s IC MC14584BF
IC4	8-749-900-77	s IC BX-1333L
IC5	8-759-982-21	s IC RC78L05A
IC6	8-759-982-44	s IC RC79L05A
L3	1-410-713-31	s INDUCTOR, CHIP 47uH
L4	1-410-713-31	s INDUCTOR, CHIP 47uH
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-100-66	s TRANSISTOR 2SC1623
Q9	8-729-100-66	s TRANSISTOR 2SC1623
Q12	8-729-100-66	s TRANSISTOR 2SC1623
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-100-66	s TRANSISTOR 2SC1623
Q15	8-729-175-73	s TRANSISTOR 2SC2757
Q16	8-729-216-22	s TRANSISTOR 2SA1162
Q17	8-729-100-66	s TRANSISTOR 2SC1623
Q18	8-729-175-73	s TRANSISTOR 2SC2757
Q19	8-729-100-66	s TRANSISTOR 2SC1623
Q20	8-729-175-73	s TRANSISTOR 2SC2757
Q21	8-729-216-22	s TRANSISTOR 2SA1162
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-175-73	s TRANSISTOR 2SC2757
Q24	8-729-100-66	s TRANSISTOR 2SC1623
Q25	8-729-175-73	s TRANSISTOR 2SC2757
Q26	8-729-175-73	s TRANSISTOR 2SC2757

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (CN-333 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q27	8-729-175-73 s	TRANSISTOR 2SC2757
Q28	8-729-175-73 s	TRANSISTOR 2SC2757
Q29	8-729-100-66 s	TRANSISTOR 2SC1623
Q30	8-729-216-22 s	TRANSISTOR 2SA1162
Q31	8-729-175-73 s	TRANSISTOR 2SC2757
Q33	8-729-100-66 s	TRANSISTOR 2SC1623
Q34	8-729-216-22 s	TRANSISTOR 2SA1162
Q35	8-729-175-73 s	TRANSISTOR 2SC2757
RV1	1-237-037-11 s	RES, ADJ, METAL 20K
RV2	1-237-037-11 s	RES, ADJ, METAL 20K
RV5	1-237-037-11 s	RES, ADJ, METAL 20K
RV6	1-237-037-11 s	RES, ADJ, METAL 20K
RV7	1-237-032-11 s	RES, ADJ, METAL 500
RV8	1-237-032-11 s	RES, ADJ, METAL 500
RV9	1-237-032-11 s	RES, ADJ, METAL 500
RV10	1-237-032-11 s	RES, ADJ, METAL 500

## CN-336 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-264-A o	MOUNTED CIRCUIT BOARD, CN-336
2pcs	7-621-775-40 s	SCREW +B 2.6X8
2pcs	7-622-207-05 o	N 2.6, TYPE 2
12pcs	7-682-547-04 s	SCREW +B 3X6
C1	1-162-638-11 s	CERAMIC, CHIP 1uF 16V
C2	1-162-638-11 s	CERAMIC, CHIP 1uF 16V
C3	1-162-638-11 s	CERAMIC, CHIP 1uF 16V
C4	1-162-638-11 s	CERAMIC, CHIP 1uF 16V
CN1	1-506-792-11 o	HEADER 60P
CN7	1-563-322-11 s	CONNECTOR, D-SUB(MOUNT TYPE)25P
CN8	1-506-796-11 s	CONNECTOR, D-SUB 15P, FEMALE
CN9	1-563-322-11 s	CONNECTOR, D-SUB(MOUNT TYPE)25P
CN10	1-563-323-11 s	CONNECTOR, D-SUB 9P, FEMALE
CN12	1-563-323-11 s	CONNECTOR, D-SUB 9P, FEMALE
CN14	1-563-323-11 s	CONNECTOR, D-SUB 9P, FEMALE
D1	8-719-100-05 s	DIODE 1S2837
D2	8-719-100-05 s	DIODE 1S2837
D3	8-719-100-05 s	DIODE 1S2837
D4	8-719-100-05 s	DIODE 1S2837
D5	8-719-100-05 s	DIODE 1S2837
D6	8-719-100-05 s	DIODE 1S2837
D7	8-719-100-05 s	DIODE 1S2837
D8	8-719-100-05 s	DIODE 1S2837
IC1	8-759-923-65 s	IC AM26LS31CNS
IC2	8-759-923-64 s	IC AM26LS32ACNS
IC3	8-759-923-65 s	IC AM26LS31CNS
IC4	8-759-923-64 s	IC AM26LS32ACNS
Q1	8-729-422-21 s	TRANSISTOR UN2224-TX
Q2	8-729-422-21 s	TRANSISTOR UN2224-TX
Q3	8-729-422-21 s	TRANSISTOR UN2224-TX
Q4	8-729-422-21 s	TRANSISTOR UN2224-TX
Q5	8-729-422-21 s	TRANSISTOR UN2224-TX
Q6	8-729-422-21 s	TRANSISTOR UN2224-TX
Q7	8-729-422-21 s	TRANSISTOR UN2224-TX
Q8	8-729-422-21 s	TRANSISTOR UN2224-TX
R1	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R2	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R3	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R4	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R5	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R6	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R7	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R8	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R9	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R10	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R11	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R12	1-216-053-00 s	METAL, CHIP 1.5K 5% 1/10W
R13	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R14	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R15	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R16	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
RY1	1-515-434-00 s	RELAY, MICRO LEAD
RY2	1-515-434-00 s	RELAY, MICRO LEAD
RY3	1-515-434-00 s	RELAY, MICRO LEAD
RY4	1-515-434-00 s	RELAY, MICRO LEAD
RY5	1-515-434-00 s	RELAY, MICRO LEAD

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (CN-336 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
RY6	1-515-434-00	s RELAY, MICRO LEAD
RY7	1-515-434-00	s RELAY, MICRO LEAD
RY8	1-515-434-00	s RELAY, MICRO LEAD

## EN-80 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-260-A	o MOUNTED CIRCUIT BOARD, EN-80 (P)
2pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-131-353-00	s TANTALUM 10uF 10% 35V
C2	1-131-353-00	s TANTALUM 10uF 10% 35V
C3	1-107-042-00	s MICA 2.2PF 500V
C4	1-107-048-00	s MICA 6.8PF 500V
C7	1-107-040-00	s MICA 1.5PF 0.5PF 500VW
C8	1-107-042-00	s MICA 2.2PF 500V
C11	1-107-085-00	s MICA 100PF 5% 50V
C12	1-109-545-00	s MICA 270PF 5% 50V
C13	1-131-345-00	s TANTALUM 0.47uF 10% 35V
C14	1-131-374-00	s TANTALUM 33uF 10% 16V
C18	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C20	1-131-374-00	s TANTALUM 33uF 10% 16V
C23	1-107-085-00	s MICA 100PF 5% 50V
C24	1-109-545-00	s MICA 270PF 5% 50V
C25	1-131-345-00	s TANTALUM 0.47uF 10% 35V
C36	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C37	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C38	1-131-374-00	s TANTALUM 33uF 10% 16V
C41	1-124-589-11	s ELECT 47uF 20% 16V
CN1	1-506-745-11	s PIN, DIN CONNECTOR (DIP) 32P
CV1	1-141-298-11	s CAP, CERAMIC TRIMMER 10P
DL1	1-415-304-00	s DELAY LINE (Y)
FL1	1-235-181-00	s FILTER, BANDPASS 4.43MHZ
IC1	8-741-135-60	s IC BX1356
IC2	8-759-906-59	s IC CX22017
IC3	8-759-982-44	s IC RC79L05A
L1	1-410-715-31	s INDUCTOR, CHIP 68uH
L2	1-410-715-31	s INDUCTOR, CHIP 68uH
Q1	8-729-175-73	s TRANSISTOR 2SC2757
Q2	8-729-175-73	s TRANSISTOR 2SC2757
Q3	8-729-112-65	s TRANSISTOR 2SA1462
Q4	8-729-100-66	s TRANSISTOR 2SC1623
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-216-22	s TRANSISTOR 2SA1162
Q7	8-729-100-66	s TRANSISTOR 2SC1623
Q8	8-729-175-73	s TRANSISTOR 2SC2757
Q9	8-729-175-73	s TRANSISTOR 2SC2757
Q10	8-729-100-66	s TRANSISTOR 2SC1623
Q11	8-729-175-73	s TRANSISTOR 2SC2757
Q12	8-729-100-66	s TRANSISTOR 2SC1623
Q13	8-729-100-66	s TRANSISTOR 2SC1623
Q14	8-729-175-73	s TRANSISTOR 2SC2757
Q15	8-729-175-73	s TRANSISTOR 2SC2757
Q16	8-729-100-66	s TRANSISTOR 2SC1623
Q17	8-729-175-73	s TRANSISTOR 2SC2757
Q18	8-729-216-22	s TRANSISTOR 2SA1162
Q19	8-729-216-22	s TRANSISTOR 2SA1162
Q20	8-729-216-22	s TRANSISTOR 2SA1162
Q21	8-729-100-66	s TRANSISTOR 2SC1623
Q22	8-729-100-66	s TRANSISTOR 2SC1623
Q23	8-729-216-22	s TRANSISTOR 2SA1162
Q24	8-729-216-22	s TRANSISTOR 2SA1162

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (EN-80 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R19	1-215-394-00	s METAL 75 1% 1/6W
R64	1-215-394-00	s METAL 75 1% 1/6W
R65	1-216-105-00	s METAL, CHIP 220K 5% 1/10W
RV1	1-237-033-11	s RES, ADJ, METAL 1K
RV2	1-237-034-11	s RES, ADJ, METAL 2K
RV3	1-237-035-11	s RES, ADJ, METAL 5K
RV4	1-237-034-11	s RES, ADJ, METAL 2K
RV5	1-237-035-11	s RES, ADJ, METAL 5K
RV6	1-237-037-11	s RES, ADJ, METAL 20K
RV7	1-237-035-11	s RES, ADJ, METAL 5K
RV8	1-237-035-11	s RES, ADJ, METAL 5K

## IV-25 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6257-258-A	o MOUNTED CIRCUIT BOARD, IV-25 (P)
1pc	2-139-126-01	o PANEL, REAR, IV
4pcs	7-682-947-01	s SCREW +PSW 3X6
2pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C4	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C7	1-124-282-00	s ELECT, NONPOLAR 22uF 20% 25V
C13	1-135-125-21	s TANTALUM, CHIP 33uF 20% 10V
C14	1-131-353-00	s TANTALUM 10uF 10% 35V
C15	1-131-353-00	s TANTALUM 10uF 10% 35V
C16	1-135-125-21	s TANTALUM, CHIP 33uF 20% 10V
C17	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C18	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C20	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C26	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C28	1-124-589-11	s ELECT 47uF 20% 16V
C29	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C30	1-131-353-00	s TANTALUM 10uF 10% 35V
C33	1-124-589-11	s ELECT 47uF 20% 16V
C34	1-131-353-00	s TANTALUM 10uF 10% 35V
C35	1-131-353-00	s TANTALUM 10uF 10% 35V
CN1	1-563-354-11	s CONNECTOR, BNC
CN2	1-563-354-11	s CONNECTOR, BNC
CN3	1-563-354-11	s CONNECTOR, BNC
CN4	1-506-745-11	s PIN, DIN CONNECTOR (DIP) 32P
CN5	1-563-354-11	s CONNECTOR, BNC
CN6	1-563-354-11	s CONNECTOR, BNC
CN7	1-563-354-11	s CONNECTOR, BNC
IC4	8-759-602-06	s IC M5109P
IC5	8-759-702-07	s IC NJM13700M
L1	1-410-721-31	s INDUCTOR CHIP 220UH
L2	1-410-721-31	s INDUCTOR CHIP 220UH
Q1	8-729-100-66	s TRANSISTOR 2SC1623
Q2	8-729-112-65	s TRANSISTOR 2SA1462-T1Y34
Q3	8-729-100-66	s TRANSISTOR 2SC1623
Q4	8-729-112-65	s TRANSISTOR 2SA1462-T1Y34
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-112-65	s TRANSISTOR 2SA1462-T1Y34
Q7	8-729-175-73	s TRANSISTOR 2SC2757
Q8	8-729-175-73	s TRANSISTOR 2SC2757
Q11	8-729-216-22	s TRANSISTOR 2SA1162
Q12	8-729-216-22	s TRANSISTOR 2SA1162
Q13	8-729-216-22	s TRANSISTOR 2SA1162
Q14	8-729-175-73	s TRANSISTOR 2SC2757
Q15	8-729-175-73	s TRANSISTOR 2SC2757
Q16	8-729-175-73	s TRANSISTOR 2SC2757
Q17	8-729-112-65	s TRANSISTOR 2SA1462-T1Y34
Q18	8-729-112-65	s TRANSISTOR 2SA1462-T1Y34
Q19	8-729-116-64	s TRANSISTOR 2SK508-T1K51
Q20	8-729-116-64	s TRANSISTOR 2SK508-T1K51
Q21	8-729-216-22	s TRANSISTOR 2SA1162
Q25	8-729-216-22	s TRANSISTOR 2SA1162
Q26	8-729-100-66	s TRANSISTOR 2SC1623
Q27	8-729-175-73	s TRANSISTOR 2SC2757
Q28	8-729-175-73	s TRANSISTOR 2SC2757
Q29	8-729-175-73	s TRANSISTOR 2SC2757
Q30	8-729-175-73	s TRANSISTOR 2SC2757

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (IV-25 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q31	8-729-175-73	s TRANSISTOR 2SC2757
Q32	8-729-175-73	s TRANSISTOR 2SC2757
Q33	8-729-175-73	s TRANSISTOR 2SC2757
Q34	8-729-175-73	s TRANSISTOR 2SC2757
Q35	8-729-175-73	s TRANSISTOR 2SC2757
Q36	8-729-175-73	s TRANSISTOR 2SC2757
R115	1-215-432-11	s METAL FILM 3K 1% 1/6W
R116	1-215-397-11	s METAL FILM 100 1% 1/6W
R117	1-215-397-11	s METAL FILM 100 1% 1/6W
RP1	1-235-528-12	s COMPOSITION CIRCUIT BLOCK
RP2	1-235-526-11	s COMPOSITION CIRCUIT BLOCK
RP3	1-235-527-11	s COMPOSITION CIRCUIT BLOCK
RV1	1-237-514-21	s RES, ADJ, METAL 500
RV2	1-237-514-21	s RES, ADJ, METAL 500
RV3	1-237-036-11	s RES, ADJ, METAL 10K
RV4	1-237-514-21	s RES, ADJ, METAL 500
RV5	1-237-514-21	s RES, ADJ, METAL 500
RV6	1-237-033-11	s RES, ADJ, METAL 1K
RV7	1-237-033-11	s RES, ADJ, METAL 1K
RV8	1-237-032-11	s RES, ADJ, METAL 500
RV9	1-237-034-11	s RES, ADJ, METAL 2K
S1	1-554-896-21	s SWITCH, SLIDE
S2	1-570-134-11	s SWITCH, SLIDE

## HN-105 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6265-120-A	o MOUNTED CIRCUIT BOARD, HN-105
1pc	7-685-645-79	s SCREW +BVTP 3X6 TYPE2 N-S
CN1	1-560-731-00	o HEADER, PIN 50P
CN2	1-563-336-11	o HOUSING, 64P
CN3	1-563-336-11	o HOUSING, 64P
CN4	1-563-336-11	o HOUSING, 64P
CN5	1-563-336-11	o HOUSING, 64P
CN6	1-563-336-11	o HOUSING, 64P
CN7	1-563-336-11	o HOUSING, 64P
CN8	1-563-336-11	o HOUSING, 64P
CN9	1-563-336-11	o HOUSING, 64P
CN10	1-563-336-11	o HOUSING, 64P
CN11	1-563-336-11	o HOUSING, 64P
CN12	1-563-336-11	o HOUSING, 64P
CN13	1-563-336-11	o HOUSING, 64P
CN14	1-563-336-11	o HOUSING, 64P
CN15	1-563-336-11	o HOUSING, 64P
CN16	1-563-336-11	o HOUSING, 64P
CN17	1-563-336-11	o HOUSING, 64P
CN18	1-563-336-11	o HOUSING, 64P
CN19	1-506-475-11	o CONNECTOR, 10P, MALE
CN20	1-506-475-11	o CONNECTOR, 10P, MALE
CN21	1-506-471-11	s CONNECTOR, 6P, MALE
CN22	1-506-469-11	s CONNECTOR, 4P, MALE
CN23	1-506-472-11	s CONNECTOR, 7P, MALE
CN24	1-506-470-11	s CONNECTOR, 5P, MALE
CN25	1-506-475-11	o CONNECTOR, 10P, MALE
CN26	1-506-471-11	s CONNECTOR, 6P, MALE
CN27	1-506-469-11	s CONNECTOR, 4P, MALE
CN28	1-506-472-11	s CONNECTOR, 7P, MALE
CN29	1-506-470-11	s CONNECTOR, 5P, MALE
CN30	1-506-475-11	o CONNECTOR, 10P, MALE
CN31	1-506-471-11	o CONNECTOR, 6P, MALE
CN32	1-506-469-11	s CONNECTOR, 4P, MALE
CN33	1-506-472-11	o CONNECTOR, 7P, MALE
CN34	1-506-470-11	o CONNECTOR, 5P, MALE
CN35	1-506-471-11	s CONNECTOR, 6P, MALE
CN36	1-506-467-11	s CONNECTOR, 2P, MALE
CN37	1-506-475-11	o CONNECTOR, 10P, MALE
CN38	1-506-467-11	o CONNECTOR, 2P, MALE
CN39	1-506-473-11	o CONNECTOR, 8P, MALE
CN40	1-506-467-11	o CONNECTOR, 2P, MALE
CN41	1-506-471-11	s CONNECTOR, 6P, MALE
CN42	1-563-336-11	o HOUSING, 64P
CN43	1-560-807-00	o HEADER 60P
CN44	1-563-336-11	o HOUSING, 64P
CN45	1-506-471-11	s CONNECTOR, 6P, MALE
CN50	1-506-473-11	s CONNECTOR, 8P, MALE

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

# HN-138 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6265-121-A	o MOUNTED CIRCUIT BOARD, HN-138
1pc	7-685-645-79	s SCREW +BVTP 3X6 TYPE2 N-S
CN1	1-563-334-11	o HOUSING, 32P
CN2	1-563-334-11	o HOUSING, 32P
CN3	1-563-334-11	o HOUSING, 32P
CN4	1-563-334-11	o HOUSING, 32P
CN5	1-563-334-11	o HOUSING, 32P
CN6	1-563-334-11	o HOUSING, 32P
CN7	1-563-334-11	o HOUSING, 32P
CN8	1-563-334-11	o HOUSING, 32P
CN9	1-563-334-11	o HOUSING, 32P
CN10	1-563-334-11	o HOUSING, 32P
CN11	1-506-485-11	s CONNECTOR, 6P, MALE
CN12	1-506-485-11	s CONNECTOR, 6P, MALE
CN13	1-506-485-11	s CONNECTOR, 6P, MALE
CN14	1-506-485-11	s CONNECTOR, 6P, MALE
CN15	1-506-485-11	s CONNECTOR, 6P, MALE
CN16	1-506-488-11	o CONNECTOR, 9P, MALE
CN17	1-506-485-11	s CONNECTOR, 6P, MALE
CN18	1-506-485-11	s CONNECTOR, 6P, MALE
CN19	1-506-485-11	s CONNECTOR, 6P, MALE
CN20	1-506-485-11	s CONNECTOR, 6P, MALE
CN21	1-506-473-11	s CONNECTOR, 8P, MALE
CN22	1-506-469-11	s CONNECTOR, 4P, MALE
CN23	1-506-467-11	o CONNECTOR, 2P, MALE
CN24	1-506-471-11	s CONNECTOR, 6P, MALE
CN25	1-506-471-11	s CONNECTOR, 6P, MALE
CN26	1-506-471-11	s CONNECTOR, 6P, MALE
CN27	1-506-471-11	s CONNECTOR, 6P, MALE
CN28	1-506-471-11	s CONNECTOR, 6P, MALE
CN29	1-506-471-11	s CONNECTOR, 6P, MALE
CN30	1-506-473-11	s CONNECTOR, 8P, MALE
CN31	1-506-473-11	s CONNECTOR, 8P, MALE
CN32	1-506-471-11	s CONNECTOR, 6P, MALE
CN33	1-506-471-11	s CONNECTOR, 6P, MALE
CN34	1-506-471-11	s CONNECTOR, 6P, MALE
CN35	1-506-471-11	s CONNECTOR, 6P, MALE
CN36	1-506-473-11	s CONNECTOR, 8P, MALE
CN37	1-506-471-11	s CONNECTOR, 6P, MALE
CN38	1-506-471-11	s CONNECTOR, 6P, MALE
CN39	1-506-471-11	s CONNECTOR, 6P, MALE
CN40	1-506-471-11	s CONNECTOR, 6P, MALE
CN41	1-506-467-11	s CONNECTOR, 2P, MALE
CN42	1-506-467-11	s CONNECTOR, 2P, MALE
CN43	1-506-468-11	s CONNECTOR, 3P, MALE

# LE-55 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-620-338-11	o PC BOARD, LE-55
4pcs	3-674-390-00	o HOLDER (B), LED
CN1	1-506-482-11	s CONNECTOR, 3P, MALE
D1	8-719-812-32	s LED TLY123, YEL
D2	8-719-812-32	s LED TLY123, YEL
D3	8-719-812-32	s LED TLY123, YEL
D4	8-719-812-32	s LED TLY123, YEL
R1	1-249-408-11	s CARBON 180 5% 1/4W
R2	1-249-408-11	s CARBON 180 5% 1/4W
R3	1-249-408-11	s CARBON 180 5% 1/4W
R4	1-249-408-11	s CARBON 180 5% 1/4W

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

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KY-155 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-373-A	o MOUNTED CIRCUIT BOARD, KY-155 (P)
1pc	1-562-148-11	o HOUSING, 3P
1pc	1-562-151-11	o HOUSING, 6P
1pc	1-562-153-11	o HOUSING, 8P
3pcs	1-564-026-00	o CONTACT, FEMALE, AWG26-30
1pc	1-574-996-11	s WIRE ASSY, FLAT TYPE (25 CORE)
1pc	2-068-008-00	s WASHER
1pc	2-139-130-01	o PLATE, SHIELD
3pcs	2-139-131-01	o HEAT SINK, CON.
4pcs	2-280-622-61	o SUPPORT (M3X20), HEXAGON
1pc	3-668-459-31	s SCREW, CONNECTOR
1pc	4-604-023-11	o NUT (D SUB), PLATE
2pcs	7-621-772-68	s SCREW +B 2X12
2pcs	7-621-773-95	s SCREW +B 2.6X6
2pcs	7-621-775-40	s SCREW +B 2.6X8
2pcs	7-622-205-05	s NUT M2 TYPE2
2pcs	7-622-207-05	o N 2.6, TYPE 2
1pc	7-623-953-01	s WASHER 2.6, FIBER
2pcs	7-682-547-04	s SCREW +B 3X6
6pcs	7-682-947-01	s SCREW +PSW 3X6
3pcs	7-682-948-01	s SCREW +PSW 3X8
6pcs	7-685-132-19	s SCREW +P 2.6X5 TYPE2 SLIT
4pcs	7-688-001-02	s W 2, SMALL
BZ1	1-529-055-11	s BUZZER
C1	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C2	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C3	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C4	1-126-157-11	s ELECT 10uF 20% 16V
C5	1-124-767-00	s ELECT, NONPOLAR 2.2uF 20% 50V
C6	1-124-767-00	s ELECT, NONPOLAR 2.2uF 20% 50V
C7	1-124-464-11	s ELECT 0.22MF 20% 50V
C8	1-163-011-11	s CERAMIC 0.0015uF 10% 50V
C11	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C12	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C13	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C14	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C15	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C16	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C17	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C18	1-124-478-11	s ELECT 100uF 20% 25V
C31	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C32	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C33	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C34	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C35	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C36	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C37	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C38	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C39	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C40	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C41	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C42	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C43	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C44	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C45	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C46	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C47	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C48	1-162-638-11	s CERAMIC, CHIP 1uF 16V

(KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C49	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C50	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C51	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C52	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C53	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C54	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C55	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C56	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C57	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C70	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C71	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C72	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C73	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C74	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C75	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C76	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C77	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C78	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C79	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
C80	1-162-286-31	s CERAMIC, CHIP 220PF 10% 50V
CN1	1-506-694-11	o HEADER 26P
CN2	1-506-492-11	o CONNECTOR, 13P, MALE
CN3	1-506-488-11	o CONNECTOR, 9P, MALE
CN6	1-506-469-11	s CONNECTOR, 4P, MALE
CN7	1-506-487-11	s CONNECTOR, 8P, MALE
CN8	1-506-485-11	s CONNECTOR, 6P, MALE
CN9	1-506-482-11	s CONNECTOR, 3P, MALE
D1	8-719-100-05	s DIODE 1S2837
D4	8-719-100-05	s DIODE 1S2837
D5	8-719-100-05	s DIODE 1S2837
D6	8-719-100-05	s DIODE 1S2837
D9	8-719-100-05	s DIODE 1S2837
D10	8-719-105-82	s DIODE RD5.1M-B2
D11	8-719-105-82	s DIODE RD5.1M-B2
D12	8-719-100-05	s DIODE 1S2837
D13	8-719-100-05	s DIODE 1S2837
D14	8-719-100-05	s DIODE 1S2837
D15	8-719-100-05	s DIODE 1S2837
D16	8-719-100-05	s DIODE 1S2837
D26	8-719-109-89	s DIODE RD5.6ESB2
D27	8-719-109-89	s DIODE RD5.6ESB2
D28	8-719-109-89	s DIODE RD5.6ESB2
D29	8-719-109-89	s DIODE RD5.6ESB2
D30	8-719-109-89	s DIODE RD5.6ESB2
D31	8-719-109-89	s DIODE RD5.6ESB2
D32	8-719-109-89	s DIODE RD5.6ESB2
D33	8-719-109-89	s DIODE RD5.6ESB2
D34	8-719-109-89	s DIODE RD5.6ESB2
D35	8-719-109-89	s DIODE RD5.6ESB2
D36	8-719-109-89	s DIODE RD5.6ESB2
D37	8-719-109-89	s DIODE RD5.6ESB2
D38	8-719-109-89	s DIODE RD5.6ESB2
D39	8-719-109-89	s DIODE RD5.6ESB2
D40	8-719-109-89	s DIODE RD5.6ESB2
D41	8-719-109-89	s DIODE RD5.6ESB2
D42	8-719-109-89	s DIODE RD5.6ESB2
D43	8-719-109-89	s DIODE RD5.6ESB2
D44	8-719-109-89	s DIODE RD5.6ESB2

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
D45	8-719-109-89	s DIODE RD5.6ESB2
D46	8-719-109-89	s DIODE RD5.6ESB2
D47	8-719-109-89	s DIODE RD5.6ESB2
D48	8-719-109-89	s DIODE RD5.6ESB2
D49	8-719-109-89	s DIODE RD5.6ESB2
D50	8-719-109-89	s DIODE RD5.6ESB2
D51	8-719-109-89	s DIODE RD5.6ESB2
D52	8-719-109-89	s DIODE RD5.6ESB2
D53	8-719-109-89	s DIODE RD5.6ESB2
D54	8-719-109-89	s DIODE RD5.6ESB2
D55	8-719-109-89	s DIODE RD5.6ESB2
D56	8-719-109-89	s DIODE RD5.6ESB2
D57	8-719-109-89	s DIODE RD5.6ESB2
D58	8-719-109-89	s DIODE RD5.6ESB2
D59	8-719-109-89	s DIODE RD5.6ESB2
D60	8-719-109-89	s DIODE RD5.6ESB2
D61	8-719-109-89	s DIODE RD5.6ESB2
D62	8-719-109-89	s DIODE RD5.6ESB2
D63	8-719-109-89	s DIODE RD5.6ESB2
D64	8-719-109-89	s DIODE RD5.6ESB2
D65	8-719-109-89	s DIODE RD5.6ESB2
D66	8-719-109-89	s DIODE RD5.6ESB2
D67	8-719-109-89	s DIODE RD5.6ESB2
D68	8-719-109-89	s DIODE RD5.6ESB2
D69	8-719-109-89	s DIODE RD5.6ESB2
D70	8-719-109-89	s DIODE RD5.6ESB2
D71	8-719-109-89	s DIODE RD5.6ESB2
D72	8-719-109-89	s DIODE RD5.6ESB2
D73	8-719-109-89	s DIODE RD5.6ESB2
D74	8-719-109-89	s DIODE RD5.6ESB2
D75	8-719-109-89	s DIODE RD5.6ESB2
D76	8-719-109-89	s DIODE RD5.6ESB2
IC1	8-759-923-64	s IC AM26LS32ACNS
IC2	8-759-200-79	s IC TC4049BF
IC3	8-759-923-64	s IC AM26LS32ACNS
IC4	8-759-923-65	s IC AM26LS31CNS
IC5	8-759-990-64	s IC MSM80C31FVGS-V1K
IC6	8-759-803-70	s IC SN74HC08NS
IC7	8-759-232-94	s IC TC74HC245AF
IC8	8-759-926-48	s IC SN74HC244NS
IC9	8-759-926-48	s IC SN74HC244NS
IC10	8-759-926-48	s IC SN74HC244NS
IC11	8-759-926-67	s IC SN74HC374NS
IC12	8-759-747-55	s IC MBM27C256A-25-X
IC13	8-759-008-79	s IC MC14011BF
IC14	8-759-008-79	s IC MC14011BF
IC15	8-759-926-67	s IC SN74HC374NS
IC16	8-759-106-58	s IC UPD7004C
IC17	8-759-009-06	s IC MC14052BF
IC18	8-759-009-06	s IC MC14052BF
IC19	8-759-926-67	s IC SN74HC374NS
IC20	8-759-009-10	s IC MC14069UBF
IC21	8-759-008-95	s IC MC14028BF
IC22	8-759-000-83	s IC MC14532BCP
IC23	8-759-926-48	s IC SN74HC244NS
IC24	8-759-926-67	s IC SN74HC374NS
IC25	8-759-926-48	s IC SN74HC244NS
IC26	8-759-926-67	s IC SN74HC374NS

## (KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC27	8-759-008-95	s IC MC14028BF
IC28	8-759-000-83	s IC MC14532BCP
IC29	8-759-000-83	s IC MC14532BCP
IC30	8-759-008-95	s IC MC14028BF
IC31	8-759-000-83	s IC MC14532BCP
IC32	8-759-000-83	s IC MC14532BCP
IC33	8-759-926-11	s IC SN74HC138NS
IC34	8-759-926-11	s IC SN74HC138NS
IC35	8-759-926-67	s IC SN74HC374NS
IC36	8-759-008-95	s IC MC14028BF
IC37	8-759-000-83	s IC MC14532BCP
IC38	8-759-000-83	s IC MC14532BCP
IC39	8-759-926-48	s IC SN74HC244NS
IC40	8-759-925-85	s IC SN74HC32NS
IC41	8-759-925-85	s IC SN74HC32NS
IC42	8-759-925-85	s IC SN74HC32NS
IC43	8-759-926-67	s IC SN74HC374NS
IC44	8-759-926-67	s IC SN74HC374NS
IC45	8-759-926-67	s IC SN74HC374NS
IC46	8-759-926-48	s IC SN74HC244NS
IC47	8-759-926-48	s IC SN74HC244NS
IC48	8-759-926-11	s IC SN74HC138NS
IC49	8-759-926-11	s IC SN74HC138NS
IC50	8-759-926-11	s IC SN74HC138NS
IC51	8-759-982-05	s IC RC7805FA
IC52	8-759-982-05	s IC RC7805FA
IC53	8-759-982-05	s IC RC7805FA
IC54	8-759-925-85	s IC SN74HC32NS
IC55	8-759-303-46	s IC HM6264LFP-15SL
IC56	8-759-925-98	s IC SN74HC107NS
IC57	8-759-926-67	s IC SN74HC374NS
IC58	8-759-926-48	s IC SN74HC244NS
IC59	8-759-926-48	s IC SN74HC244NS
IC60	8-759-926-67	s IC SN74HC374NS
IC61	8-759-200-79	s IC TC4049BF
IC62	8-759-200-79	s IC TC4049BF
IC63	8-759-803-70	s IC SN74HC08NS
IC64	8-759-926-67	s IC SN74HC374NS
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
Q2	8-729-422-21	s TRANSISTOR UN2224-TX
Q3	8-729-422-21	s TRANSISTOR UN2224-TX
Q4	8-729-422-21	s TRANSISTOR UN2224-TX
Q9	8-729-422-21	s TRANSISTOR UN2224-TX
Q10	8-729-422-21	s TRANSISTOR UN2224-TX
Q11	8-729-422-21	s TRANSISTOR UN2224-TX
Q12	8-729-422-21	s TRANSISTOR UN2224-TX
Q13	8-729-422-21	s TRANSISTOR UN2224-TX
Q14	8-729-422-21	s TRANSISTOR UN2224-TX
Q15	8-729-422-21	s TRANSISTOR UN2224-TX
Q16	8-729-422-21	s TRANSISTOR UN2224-TX
Q17	8-729-422-21	s TRANSISTOR UN2224-TX
Q18	8-729-422-21	s TRANSISTOR UN2224-TX
Q19	8-729-422-21	s TRANSISTOR UN2224-TX
Q20	8-729-422-21	s TRANSISTOR UN2224-TX
Q21	8-729-422-21	s TRANSISTOR UN2224-TX
Q22	8-729-422-21	s TRANSISTOR UN2224-TX
Q23	8-729-422-21	s TRANSISTOR UN2224-TX
Q24	8-729-422-21	s TRANSISTOR UN2224-TX

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".





## (KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R70	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R71	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R72	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R73	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R74	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R75	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R76	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R77	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R78	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R79	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R80	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R87	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R88	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R89	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R90	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R91	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R92	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R93	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R94	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R95	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R96	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R97	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R98	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R99	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R100	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R101	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R102	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R103	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R104	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R105	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R106	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R107	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R108	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R109	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R110	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R111	1-216-009-00	s METAL, CHIP 22 5% 1/10W
R112	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R113	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R114	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R115	1-216-009-00	s METAL, CHIP 22 5% 1/10W
R116	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R117	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R118	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R119	1-216-009-00	s METAL, CHIP 22 5% 1/10W
R120	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R121	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R122	1-216-049-00	s METAL, CHIP 1K 5% 1/10W
R123	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R124	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R125	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R126	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R127	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R128	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R150	1-249-414-21	s CARBON 560 5% 1/4W
R151	1-249-414-21	s CARBON 560 5% 1/4W
R152	1-249-414-21	s CARBON 560 5% 1/4W
R153	1-249-414-21	s CARBON 560 5% 1/4W
R154	1-249-414-21	s CARBON 560 5% 1/4W
R155	1-249-414-21	s CARBON 560 5% 1/4W

## (KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R156	1-249-414-21	s CARBON 560 5% 1/4W
R157	1-249-414-21	s CARBON 560 5% 1/4W
R158	1-249-414-21	s CARBON 560 5% 1/4W
R159	1-249-414-21	s CARBON 560 5% 1/4W
R160	1-249-414-21	s CARBON 560 5% 1/4W
RV1	1-238-720-11	s RES, VAR, CARBON 5K
RV2	1-238-720-11	s RES, VAR, CARBON 5K
RV3	1-238-720-11	s RES, VAR, CARBON 5K
RV4	1-238-720-11	s RES, VAR, CARBON 5K
RV5	1-238-720-11	s RES, VAR, CARBON 5K
RV6	1-238-720-11	s RES, VAR, CARBON 5K
RV7	1-238-720-11	s RES, VAR, CARBON 5K
RV8	1-238-720-11	s RES, VAR, CARBON 5K
RV9	1-238-720-11	s RES, VAR, CARBON 5K
RV10	1-238-720-11	s RES, VAR, CARBON 5K
RV11	1-238-720-11	s RES, VAR, CARBON 5K
RV12	1-238-720-11	s RES, VAR, CARBON 5K
RV13	1-238-720-11	s RES, VAR, CARBON 5K
RV14	1-238-720-11	s RES, VAR, CARBON 5K
RV15	1-238-720-11	s RES, VAR, CARBON 5K
RV16	1-238-720-11	s RES, VAR, CARBON 5K
S1	1-572-036-31	s SWITCH, PUSH (1 KEY)
S2	1-572-036-61	s SWITCH, PUSH (1 KEY)
S3	1-572-036-71	s SWITCH, PUSH (1 KEY)
S4	1-572-036-81	s SWITCH, PUSH (1 KEY)
S5	1-572-036-91	s SWITCH, PUSH (1 KEY)
S6	1-572-036-31	s SWITCH, PUSH (1 KEY)
S7	1-572-037-11	s SWITCH, PUSH (1 KEY)
S8	1-572-037-21	s SWITCH, PUSH (1 KEY)
S9	1-572-037-31	s SWITCH, PUSH (1 KEY)
S10	1-572-034-31	s SWITCH, PUSH (1 KEY)
S11	1-572-031-11	s SWITCH, PUSH (1 g-)
S12	1-572-037-71	s SWITCH, PUSH (1 KEY)
S13	1-572-036-41	s SWITCH, PUSH (1 KEY)
S14	1-572-037-41	s SWITCH, PUSH (1 KEY)
S15	1-572-036-51	s SWITCH, PUSH (1 KEY)
S16	1-572-037-81	s SWITCH, PUSH (1 KEY)
S17	1-572-037-91	s SWITCH, PUSH (1 KEY)
S18	1-572-032-51	s SWITCH, PUSH (1 KEY)
S19	1-572-032-41	s SWITCH, PUSH (1 KEY)
S20	1-572-032-41	s SWITCH, PUSH (1 KEY)
S21	1-572-032-41	s SWITCH, PUSH (1 KEY)
S22	1-572-032-41	s SWITCH, PUSH (1 KEY)
S23	1-572-032-41	s SWITCH, PUSH (1 KEY)
S24	1-572-032-41	s SWITCH, PUSH (1 KEY)
S25	1-572-032-41	s SWITCH, PUSH (1 KEY)
S26	1-572-032-41	s SWITCH, PUSH (1 KEY)
S27	1-572-032-61	s SWITCH, PUSH (1 KEY)
S28	1-572-032-81	s SWITCH, PUSH (1 KEY)
S29	1-572-032-71	s SWITCH, PUSH (1 KEY)
S30	1-572-032-71	s SWITCH, PUSH (1 KEY)
S31	1-572-032-71	s SWITCH, PUSH (1 KEY)
S32	1-572-032-71	s SWITCH, PUSH (1 KEY)
S33	1-572-032-71	s SWITCH, PUSH (1 KEY)
S34	1-572-032-71	s SWITCH, PUSH (1 KEY)
S35	1-572-032-71	s SWITCH, PUSH (1 KEY)
S36	1-572-032-71	s SWITCH, PUSH (1 KEY)
S37	1-572-032-91	s SWITCH, PUSH (1 KEY)

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (KY-155 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
S38	1-572-032-21	s SWITCH, PUSH (1 KEY)
S39	1-572-032-11	s SWITCH, PUSH (1 KEY)
S40	1-572-032-11	s SWITCH, PUSH (1 KEY)
S41	1-572-032-11	s SWITCH, PUSH (1 KEY)
S42	1-572-032-11	s SWITCH, PUSH (1 KEY)
S43	1-572-032-11	s SWITCH, PUSH (1 KEY)
S44	1-572-032-11	s SWITCH, PUSH (1 KEY)
S45	1-572-032-11	s SWITCH, PUSH (1 KEY)
S46	1-572-032-11	s SWITCH, PUSH (1 KEY)
S47	1-572-032-31	s SWITCH, PUSH (1 KEY)
S48	1-572-035-91	s SWITCH, PUSH (1 KEY)
S49	1-572-036-11	s SWITCH, PUSH (1 KEY)
S50	1-572-036-21	s SWITCH, PUSH (1 KEY)
S51	1-572-037-51	s SWITCH, PUSH (1 KEY)
S52	1-572-037-61	s SWITCH, PUSH (1 KEY)
S53	1-572-081-11	s SWITCH, PUSH (1 KEY)
S54	1-572-038-31	s SWITCH, PUSH (1 KEY)
S55	1-572-038-21	s SWITCH, PUSH (1 KEY)
S56	1-572-033-11	s SWITCH, PUSH (1 KEY)
S57	1-572-033-21	s SWITCH, PUSH (1 KEY)
S58	1-572-033-31	s SWITCH, PUSH (1 KEY)
S59	1-572-033-41	s SWITCH, PUSH (1 KEY)
S60	1-572-033-51	s SWITCH, PUSH (1 KEY)
S61	1-572-033-61	s SWITCH, PUSH (1 KEY)
S62	1-572-033-71	s SWITCH, PUSH (1 KEY)
S63	1-572-033-81	s SWITCH, PUSH (1 KEY)
S64	1-572-033-91	s SWITCH, PUSH (1 KEY)
S65	1-572-034-11	s SWITCH, PUSH (1 KEY)
S66	1-572-034-21	s SWITCH, PUSH (1 KEY)
S67	1-572-038-41	s SWITCH, PUSH (1 KEY)
S68	1-572-034-71	s SWITCH, PUSH (1 KEY)
S69	1-572-034-61	s SWITCH, PUSH (1 KEY)
X1	1-567-796-11	s OSCILLATOR, CRYSTAL 14.7456MHz
X2	1-567-160-00	s OSCILLATOR, CERAMIC

## LP-47 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-631-551-11	o PRINTED CIRCUIT BOARD, LP-47
D1	8-719-979-87	s DIODE LD-701MG
D2	8-719-979-87	s DIODE LD-701MG
D3	8-719-979-87	s DIODE LD-701MG
D4	8-719-979-87	s DIODE LD-701MG
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
Q2	8-729-422-21	s TRANSISTOR UN2224-TX
Q3	8-729-422-21	s TRANSISTOR UN2224-TX
Q4	8-729-422-21	s TRANSISTOR UN2224-TX
R1	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R2	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R3	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R4	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R5	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R6	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R7	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R8	1-216-025-00	s METAL, CHIP 100 5% 1/10W

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

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LP-48 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-631-552-11	o PRINTED CIRCUIT BOARD, LP-48
D1	8-719-979-87	s DIODE LD-701MG
D2	8-719-979-87	s DIODE LD-701MG
D3	8-719-979-87	s DIODE LD-701MG
D4	8-719-979-87	s DIODE LD-701MG
D5	8-719-919-96	s LED LD-101MG-J, GRN
D6	8-719-919-96	s LED LD-101MG-J, GRN
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
Q2	8-729-422-21	s TRANSISTOR UN2224-TX
Q3	8-729-422-21	s TRANSISTOR UN2224-TX
Q4	8-729-422-21	s TRANSISTOR UN2224-TX
Q5	8-729-422-21	s TRANSISTOR UN2224-TX
Q6	8-729-422-21	s TRANSISTOR UN2224-TX
R1	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R2	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R3	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R4	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R5	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R6	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R7	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R8	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R9	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R10	1-216-025-00	s METAL, CHIP 100 5% 1/10W

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LP-49 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-631-833-11	o PRINTED CIRCUIT BOARD, LP-49
D1	8-719-979-87	s DIODE LD-701MG
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
R1	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R2	1-216-025-00	s METAL, CHIP 100 5% 1/10W

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KY-157 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-374-A	o MOUNTED CIRCUIT BOARD, KY-157
4pcs	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
C1	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C2	1-164-232-11	s CERAMIC 0.01uF 10% 50V
C3	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C10	1-162-286-31	s CERAMIC 220PF 10% 50V
CN1	1-506-489-11	s CONNECTOR, 10P, MALE
CN2	1-506-484-11	s CONNECTOR, 5P, MALE
CN3	1-506-488-11	o CONNECTOR, 9P, MALE
CN4	1-506-492-11	o CONNECTOR, 13P, MALE
IC1	8-759-000-83	s IC MC14532BCP
IC2	8-759-925-85	s IC SN74HC32NS
IC3	8-759-000-83	s IC MC14532BCP
IC4	8-759-926-48	s IC SN74HC244NS
IC5	8-759-926-48	s IC SN74HC244NS
IC6	8-759-926-67	s IC SN74HC374NS
IC7	8-759-000-71	s IC MC14514BCP
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
Q2	8-729-422-21	s TRANSISTOR UN2224-TX
Q3	8-729-422-21	s TRANSISTOR UN2224-TX
Q4	8-729-422-21	s TRANSISTOR UN2224-TX
Q5	8-729-422-21	s TRANSISTOR UN2224-TX
Q6	8-729-422-21	s TRANSISTOR UN2224-TX
Q7	8-729-422-21	s TRANSISTOR UN2224-TX
Q8	8-729-422-21	s TRANSISTOR UN2224-TX
Q9	8-729-422-21	s TRANSISTOR UN2224-TX
Q10	8-729-422-21	s TRANSISTOR UN2224-TX
Q11	8-729-422-21	s TRANSISTOR UN2224-TX
Q12	8-729-422-21	s TRANSISTOR UN2224-TX
Q13	8-729-422-21	s TRANSISTOR UN2224-TX
Q14	8-729-422-21	s TRANSISTOR UN2224-TX
Q15	8-729-422-21	s TRANSISTOR UN2224-TX
Q16	8-729-422-21	s TRANSISTOR UN2224-TX
R1	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R2	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R3	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R4	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R5	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R6	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R7	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R8	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R9	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R10	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R11	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R12	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R13	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R14	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R15	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R16	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R17	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R18	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R19	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R20	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R21	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R22	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R23	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R24	1-216-025-00	s METAL, CHIP 100 5% 1/10W

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (KY-157 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R30	1-249-414-11	s CARBON 560 5% 1/4W
R61	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R62	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R63	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R64	1-216-025-00	s METAL, CHIP 100 5% 1/10W
RV1	1-238-724-11	s VOLUME (JOY STICK TYPE) 10K
S1	1-572-034-81	s SWITCH, PUSH (1 KEY)
S2	1-572-034-91	s SWITCH, PUSH (1 KEY)
S3	1-572-035-11	s SWITCH, PUSH (1 KEY)
S4	1-572-035-21	s SWITCH, PUSH (1 KEY)
S5	1-572-035-31	s SWITCH, PUSH (1 KEY)
S6	1-572-034-41	s SWITCH, PUSH (1 KEY)
S7	1-572-035-41	s SWITCH, PUSH (1 KEY)
S8	1-572-035-51	s SWITCH, PUSH (1 KEY)
S9	1-572-035-61	s SWITCH, PUSH (1 KEY)
S10	1-572-035-81	s SWITCH, PUSH (1 KEY)
S11	1-572-035-71	s SWITCH, PUSH (1 KEY)
S12	1-572-034-51	s SWITCH, PUSH (1 KEY)
S13	1-572-031-11	s SWITCH, PUSH (1 KEY)
S14	1-572-031-11	s SWITCH, PUSH (1 KEY)
S15	1-572-031-11	s SWITCH, PUSH (1 KEY)
S16	1-572-031-11	s SWITCH, PUSH (1 KEY)
S17	1-572-031-11	s SWITCH, PUSH (1 KEY)
S18	1-572-031-11	s SWITCH, PUSH (1 KEY)
S19	1-572-031-11	s SWITCH, PUSH (1 KEY)
S20	1-572-031-11	s SWITCH, PUSH (1 KEY)

## KY-158 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-375-A	o MOUNTED CIRCUIT BOARD, KY-158
C1	1-162-638-11	s CERAMIC, CHIP 1uF 16V
C10	1-162-286-31	s CAP, CERAMIC 220PF 10% 50V
CN1	1-506-489-11	s CONNECTOR, 10P, MALE
CN2	1-506-484-11	s CONNECTOR, 5P, MALE
D1	8-719-979-87	s DIODE LD-701MG
D2	8-719-979-87	s DIODE LD-701MG
D3	8-719-979-87	s DIODE LD-701MG
D4	8-719-979-87	s DIODE LD-701MG
IC1	8-759-009-36	s IC MC14511BF
IC2	8-759-009-36	s IC MC14511BF
IC3	8-759-009-36	s IC MC14511BF
IC4	8-759-926-67	s IC SN74HC374NS
IC5	8-759-009-36	s IC MC14511BF
IC6	8-759-009-36	s IC MC14511BF
IC7	8-759-009-36	s IC MC14511BF
IC8	8-759-009-36	s IC MC14511BF
ND1	8-719-980-30	s DIODE GL-8D03D
ND2	8-719-980-30	s DIODE GL-8D03D
ND3	8-719-980-30	s DIODE GL-8D03D
ND4	8-719-980-30	s DIODE GL-8D03D
ND5	8-719-980-30	s DIODE GL-8D03D
ND6	8-719-980-30	s DIODE GL-8D03D
ND7	8-719-980-30	s DIODE GL-8D03D
Q1	8-729-422-21	s TRANSISTOR UN2224-TX
Q2	8-729-422-21	s TRANSISTOR UN2224-TX
Q3	8-729-422-21	s TRANSISTOR UN2224-TX
Q4	8-729-422-21	s TRANSISTOR UN2224-TX
Q5	8-729-100-66	s TRANSISTOR 2SC1623
Q6	8-729-100-66	s TRANSISTOR 2SC1623
R1	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R2	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R3	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R4	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R5	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R6	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R7	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R8	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R9	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R10	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R11	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R12	1-216-043-00	s METAL, CHIP 560 5% 1/10W
R13	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R14	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R15	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R16	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R17	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R18	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R19	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R20	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R21	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R22	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R23	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R24	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R25	1-216-041-00	s METAL, CHIP 470 5% 1/10W

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".



## (KY-158 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R26	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R27	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R28	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R29	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R30	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R31	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R32	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R33	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R34	1-216-043-00	s METAL, CHIP 560 5% 1/10W
R35	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R36	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R37	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R38	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R39	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R40	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R41	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R42	1-216-043-00	s METAL, CHIP 560 5% 1/10W
R43	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R44	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R45	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R46	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R47	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R48	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R49	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R50	1-216-043-00	s METAL, CHIP 560 5% 1/10W
R51	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R52	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R53	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R54	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R55	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R56	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R57	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R58	1-216-043-00	s METAL, CHIP 560 5% 1/10W
R59	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R60	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R61	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R62	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R63	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R64	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R70	1-249-414-11	s CARBON 560 5% 1/4W

## EX-201 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
CN1	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN2	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN3	1-506-747-11	s CONNECTOR, DIN 64P, MALE
CN4	1-563-336-11	o HOUSING, 64P
CN5	1-563-336-11	o HOUSING, 64P
CN6	1-563-336-11	o HOUSING, 64P
CN7	1-563-340-11	o HOUSING, CONNECTOR (DIP) 64P
CN8	1-563-340-11	o HOUSING, CONNECTOR (DIP) 64P
CN9	1-563-340-11	o HOUSING, CONNECTOR (DIP) 64P

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

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EX-236 BOARD  
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Ref. No. or Q'ty	Part No.	SP Description
1pc	7-685-646-79	s SCREW +BVTP 3X8 TYPE2 N-S
CN1	1-563-338-11	o HOUSING, CONNECTOR (DIP) 32P
CN2	1-506-745-11	s PIN, DIN CONNECTOR (DIP) 32P

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FRAME  
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Ref. No. or Q'ty	Part No.	SP Description
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(to CN-330 board)

CN1	1-562-147-41	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN2	1-562-153-31	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN3	1-562-147-21	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN4	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN5	1-562-153-21	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(to CN-332 board)

CN1	1-562-151-11	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN2	1-562-151-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN3	1-562-151-21	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN4	1-562-153-11	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN5	1-562-151-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN6	1-562-149-31	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN7	1-562-151-11	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN8	1-562-151-21	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN9	1-562-149-11	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN10	1-562-149-11	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN11	1-562-149-11	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN12	1-562-153-31	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN13	1-562-148-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(to HN-105 board)

CN19	1-562-155-11	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN20	1-562-155-11	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN21	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

## (FRAME)

Ref. No. or Q'ty	Part No.	SP Description
CN22	1-562-149-11	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN23	1-562-152-11	o HOUSING, 7P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN24	1-562-150-11	o HOUSING, 5P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN25	1-562-155-31	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN26	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN27	1-562-149-31	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN28	1-562-152-31	o HOUSING, 7P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN29	1-562-150-31	o HOUSING, 5P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN30	1-562-155-21	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN31	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN32	1-562-149-21	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN33	1-562-152-31	o HOUSING, 7P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN34	1-562-150-21	o HOUSING, 5P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN35	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN36	1-562-147-11	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN37	1-562-155-11	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN38	1-562-147-41	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN39	1-562-153-31	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN40	1-562-147-21	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN41	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN45	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN50	1-562-153-21	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

## (FRAME)

Ref. No. or Q'ty	Part No.	SP Description
(to HN-138 board)		
CN11	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN12	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN13	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN14	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN15	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN16	1-562-154-11	o HOUSING, 9P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN17	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN18	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN19	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN20	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN21	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN22	1-562-149-11	o HOUSING, 4P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN23	1-562-149-21	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN24	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN25	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN26	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN27	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN28	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN29	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN30	1-562-151-11	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN31	1-562-151-11	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN32	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN33	1-562-151-31	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

(FRAME)

Ref. No. or Q'ty	Part No.	SP Description
CN34	1-562-151-41	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN35	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN36	1-562-153-11	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN37	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN38	1-562-151-21	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN39	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN40	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN41	1-562-147-11	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN42	1-562-147-31	o HOUSING, 2P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN43	1-562-148-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(to KY-155 board)

CN2	1-562-627-11	o HOUSING, 13P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN3	1-562-154-11	o HOUSING, 9P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN7	1-562-153-11	o HOUSING, 8P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN8	1-562-151-11	o HOUSING, 6P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN9	1-562-148-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(to KY-157 board)

CN1	1-562-155-11	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN2	1-562-150-11	o HOUSING, 5P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN3	1-562-154-11	o HOUSING, 9P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN4	1-562-627-11	o HOUSING, 13P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(to KY-158 board)

CN1	1-562-155-11	o HOUSING, 10P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
CN2	1-562-150-11	o HOUSING, 5P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30

(FRAME)

Ref. No. or Q'ty	Part No.	SP Description
(to LE-55 board)		
CN1	1-562-148-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
(to SW REG)		
CN1	1-562-148-31	o HOUSING, 3P
	1-564-026-11	o CONTACT, FEMALE, AMG26-30
(to BRAKER)		
CN1	Δ 1-560-222-11	s INLET 3P
	1-562-210-11	o CONTACT, FEMALE AMG-8-22
	4-601-466-11	s COVER, 3P INLET
CN101	1-562-211-11	o HOUSING, 3P
	1-535-324-11	o TERMINAL, FASTEN
S1	Δ 1-570-117-11	s SWITCH, SEESAW (AC POWER)

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".

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**PACKING MATERIALS & SUPPLIED ACCESSORIES**  
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Ref. No.

or Q'ty Part No. SP Description

1pc	A-6253-806-A	o EX-201 ASSY
2pc	X-2127-223-1	o ANGLE ASSY(4U), RACK
1pc	1-564-592-11	o CONNECTOR, D SUB (PLUG) 15P
1pc	1-564-747-11	o CONNECTOR, D SUB (PLUG) 25P
1pc	1-574-993-11	s SWC-2530D
1pc	1-574-994-11	s WIRE ASSY, FLAT TYPE (26 CORE)
1pc	2-139-141-01	o PLATE, SHIELD, EX
1pc	▲1-556-760-11	s POWER CORD
1pc	2-990-242-01	o HOLDER (B), PLUG

Parts that are not listed in the "reference numbers order list" are shown in the "General Purpose Electrical Parts List".